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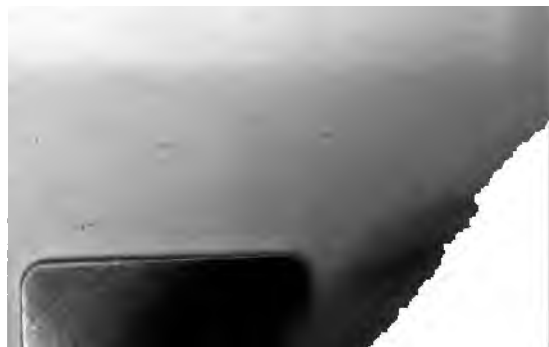
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Et quoniam variant morbi, variabimus artes.
Mille mali species, mille salutis erunt.



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For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long, but an invaluable series.—RUSH.

ORIGINAL PAPERS, AND CASES,
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER
AUTHENTIC SOURCES.

BUBO.

On the Pathology, exciting Causes, and Treatment of Bubo. By
S. D. BROUGHTON, Surgeon to the 2d Life Guards, and to the
St. George's and St. James's Dispensary.

General Observations.

THERE is no species of tumor so frequently presented to the surgeon's notice, and at the same time so troublesome to manage, as the common bubo, or enlarged glands in the groin and axilla. In military practice, (especially among cavalry soldiers.) and with the labouring classes, which form a considerable portion of dispensary patients, this complaint is most often encountered. Its course is usually marked by an uncertain and variable character, and is productive of more or less constitutional irritation, while it entails a long and tedious suspension of daily duties and labours. Interposed between the trunk and the limbs, every movement of the latter irritates and inflames the tumor and the surrounding integuments. Emaciation and debility generally ensue from this state of the parts affected, and not unfrequently fever attends, so as to render repose, with cooling and soothing remedies, absolutely necessary. The absolute absorption of morbid matter, and its conveyance into the body of the gland, its positive existence there as an immediate exciting cause, and the alleged infectious nature of the suppuration in glands so excited, appear to be

points resting entirely upon hypothetical bases. It may, indeed, be very fairly questioned whether such considerations should influence our treatment of buboes, upon the ground that, whatever might have been the remote cause, their appearance is unconnected with it, but as a secondary effect or consequence. The ordinary result of the dispersion of a bubo, even after suppuration has taken place, seems to warrant and support this question.

In the greater number of cases commonly met with, the bubo probably arises from some local source of irritation, mechanical or otherwise, and remote from the apparent glandular affection. Thus, an irritable corn, or pressure from a tight boot or shoe, a scratch or excoriation of the skin, or any other such simple cause, acting upon parts in the absorbent line of direction leading to glands, is just as likely to excite the enlargement of one or more of them, as the introduction or formation of virulent matter; nor are the signs which buboes exhibit from either source in any way peculiarly characteristic of the original exciting cause, although their subsequent appearance may perhaps become modified by constitutional diathesis; as, for example, in a patient of a naturally strumous habit. In whatever manner the bubo may be produced, its occasional progress indicates the necessity of an early attention to the means best calculated to disperse it in the incipient stage, in order to obviate suppuration, as well as to prevent that indolent and indurated state often assumed, and in which its prolonged continuance is a source of much annoyance and discomfort to the patient.

Of the Parts immediately involved in the Formation of Bubo.

If the formation of buboes be carefully watched, we shall find that the glands themselves are the first and immediate seat of inflammatory action, and this condition is not commonly traceable along the course of the lymphatic vessels connected with the affected glands: frequently, indeed, the remote exciting cause is looked for in vain. Usually the mere enlargement of a single gland is not productive of much pain and irritation, until the surrounding cellular connexions become involved, and the throbbing of the neighbouring cutaneous vessels renders the integuments tense and tumefied. The little degree of nervous development in these glands may account for this absence of pain at first, and their relations to other organs by means of nervous filaments point out the source of the general sympathy which they hold in common with the system, while

the sensibility and profusion of the nerves of the cutis account for the increase of pain and tenderness following the progress of the inflammatory stage. Although sometimes the cellular inflammation extends far around, and an erysipelatous action occasionally supervenes, yet the inflammatory condition of the parts is most commonly circumscribed.

Proximate Cause of Bubo.

The proximate cause of this condition of the parts affected appears to be obstruction to the free course of the lymph. Whether on this occasion the fluid may hold suspended in it any virulent substance or not, seems to be a question relating to a very doubtful fact. The probability appears to me to be, that the *proximate cause is irritation only*, and *not absorption of virus*; and that the latter, when existing, is *only the remote cause*. The lymphatic obstruction probably commences in the capillary vessels, producing distention of the veins and arteries; or a state of *atony* may be said to belong to the vasa efferentia of the conglobate glands, induced by a distant source of irritation; and the lymph thus obstructed is poured into the surrounding cellular substance, the finer particles escaping by transpiration, and the grosser adhesive matter remaining to amalgamate the cells with the adjacent texture, so as to limit the overflowing of the lymph and to circumscribe the inflammatory action, while the hardness and tumescence in the parts themselves are thus increased. In this condition the glands so placed are most likely irrecoverably lost, and their functions transferred to others; the fluid lymph becomes dispersed, and the tumor dwindles to a small, permanently hard, and round ball.

Of the Suppuration of Buboes.

When the inflammatory action is incontrollable, suppuration occurs in the centre of the tumor, and the surrounding walls of matted and condensed cellular texture perfectly enclose the pus, and thus the abscess is contained in a sac. This process is gone through with different degrees of activity and celerity: when slowly conducted, the pus may often become dispersed, and the tumor so reduced to the natural level of the integuments around. But, when the formation of pus is rapid and copious, the irritation from overstrained skin is excessive, and relieved only by a spontaneous discharge of its contents, or by an artificial opening.

Excepting the pain and irritation from pressure, and the

straining of sensible parts, the presence of the pus, or even its reabsorption, appears to be innoxious to the system; unless, indeed, the stagnant collection, by exposure to the atmospheric air in an open bubo, should generate carburetted and sulphuretted hydrogen gas, when the altered qualities of the pus become the exciting cause of serious disorder in the constitution.

Of the Progress and Termination of Buboës generally, and their exciting Causes.

To form any certain prognosis of the termination of a bubo in its early stage seems to be impossible, so variable is its general character and appearance. When active and irritable, it will suddenly become passive and stationary; or, when to outward view indolent, it will occasionally suppurate quickly, without stretching the integuments, and thus creating no pain or irritation.

I am unaware of any specifically marked signs by which the terminations are to be prognosticated, until the eve of their occurrence, either local or constitutional. The agency by which the changes are affected lie concealed, and the vicissitudes which buboës go through have, in consequence, a capricious appearance. These changes do not seem to depend directly on the gland itself, for, throughout the different stages of buboës, the glands remain much in the same state and size. The changes seem to be rather referrible to the integuments and cellular substance over the inflamed gland, and these run into inflammation more or less extensively, assuming different shades of redness, sometimes having a rosy, sometimes a bluish, and at others a brownish tint, probably from constitutional peculiarities rather than any which may be connected with the ultimate exciting cause.

From whatever source a bubo may originally proceed, we seem to have no proof that its progress and termination are influenced by it. A mild gonorrhœa of short duration, accumulation of viscid mucus behind the glans, a phymosis, an injury of the foot or toe, &c. are followed by buboës, similar in their appearance, continuance, and termination, to those arising from the most virulent gonorrhœa, or the inoculation of poisonous matter. I should imagine the buboës of the plague itself to be influenced by the state of the constitution, and not by the virus supposed to be imbibed. When, therefore, we hear of the malignant, the mild, the sympathetic, the syphilitic, or the strumous bubo, I should be disposed to refer all these characteristic distinc-

tions equally to constitutional influence, to the disorders of health, and not to the nature and properties of the ultimate exciting cause; and, as such peculiarities are not usually pre-evident, the prognosis of bubo is seldom certain.

Of the Treatment of Buboes generally.

The foregoing views of the pathology and exciting causes of bubo have been introduced with the view of adapting the treatment of this tumor to the principle suggested. Accordingly, the first indication seems to be to remove the irritation derived from the presence of an enlarged and indurated gland in the groin or axilla; the means most suited to which end appear to be such as at once diminish and soothe the swollen parts, and these are of a topical kind. If pain and fever exist, local applications will thus tranquillize the system, in conjunction with repose in a recumbent position. The choice of local remedies must be governed by the state of the parts. The active and irritable state requires one species of application, and the indolent, sluggish, and insensible state, another. The secondary state of bubo, that of established suppuration, may be considered in the same light, and requires its treatment to be adapted to its immediate condition. Great attention seems to be necessary to the secondary state, as upon the choice of remedies depends much of its subsequent condition and duration.

Treatment of Bubo in its primary State.

If the incipient bubo be active and irritable, the remedies should be directed to the tranquillizing of the parts, and the adoption of such measures as may best secure the end in view. The inflammation of cellular surfaces seems to be beneficially treated with cooling, astringent, and evaporating lotions; but, in glandular inflammation, such remedies appear to be insufficient, if not injurious. They are not calculated to relax and soothe the indurated and irritable gland, to check its swelling and suppuration, or diminish pain, although they lessen the inflammatory action of the softer and more yielding parts around, and contract the limits of inflammation within the sphere of the tumor, which advances in about the same ratio. The application, also, of leeches in the incipient state appears to aggravate the condition of the tumor, so that the advantages of abstracting blood seem to be counterpoised by the irritation of the leechbites. Experience has led me to discard the use of cold lotions and leeches, as inadequate to

secure the fulfilment of the objects in view, and rather tending to increase than relieve the existing symptoms, and promote the advancement of the tumor, instead of its repulsion, ultimately. A moderate and equable degree of warmth, combined with moisture, is more calculated to soothe the parts, repress their activity, relax the induration, and finally disperse the tumor. To this end, fomentations thrice a day, succeeded by light, warm, and moist poultices of linseed meal, or finely grated bread, or both mixed together, and soaked in boiled milk and water, may be advantageously applied; and, if these be insufficient to allay pain, the fomentations and poultices may be made of the decoction of poppyheads and conium. The first appearance of enlarged glands will often yield merely to fomentations, if the body be kept in repose. The result of such a principle of treatment, when the tumor subsides, is not attended generally, as in cases after the use of cold applications, with a kind of marble-like ball left in the groin or axilla, and liable to subsequent relapse. The dispersion in one case is more complete than in the other. Where the tumor is not active and irritable, its advance may sometimes be checked by cold washes; but it is then liable to become stationary and indurated; an effect not resulting from the use of fomentations and poultices.

With regard to constitutional remedies, such as tend to diminish the action of the heart and arteries, to cool the system, and assist the suppression and dispersion of the tumor, are indicated; and, in doses proportioned to the heat of the skin and fever, the invaluable remedy of tartarised antimony, with saline mixture and Epsom salts and senna, I have always found to be highly useful adjuncts, and far preferable to the use of narcotics, where pain attends the incipient advance of bubo, excepting as local applications. And, where plethora is present, bleeding from the arm will always tend to check the inflammatory stage, with general advantage to the system. But, when fever does not exist, and the tumor is not actively inflamed, I see no advantage in the use of antimony, &c.: on the contrary, in sluggish cases, the reducing plan may perhaps be injurious rather than beneficial.

It occasionally happens that the incipient stages of bubo are not attended with tension of the superincumbent integuments, which lay more loosely over the surface of the tumor. But this state of the parts may soon become altered, if repose be not enjoined, and the case thus become prolonged and more complicated. This passive state is

also more aggravated by cold applications and leeches; but it is less likely to be completely reduced by mild, moist, and warm applications, than the more irritable and active tumor. When these, therefore, have apparently brought the tumefied parts into a perfect state of passiveness, and the induration and swelling yield no further, blisters repeatedly applied, or cautious and gentle friction with the *Lini-mentum olei camphorati*, to which the *Unguentum hydr.* may be usefully added, often tend to the gradual removal of this chronic state. Should too much action be excited, the fomentations and poulticing may be resorted to again beneficially. If the first intention of stimulating remedies be not fulfilled, they have this advantage, that they bring the tumor forward to suppuration, and thus afford the means of destruction, if we cannot disperse it, and so prevent the inconvenience and liability to relapse which belong to indurated and enlarged glandular tumors situated in the groin or axilla. With labourers and soldiers, I have in such cases generally recommended a return to labour and duty until active inflammation be excited, and a chance thus afforded of the permanent removal of a troublesome and inconvenient affection.

Treatment of Bubo in its secondary State.

When the measures which I have recommended to be pursued in the primary state of *bubo* do not succeed in preventing its advance to the secondary state, and suppuration is inevitable, whether cold or warm applications, mild or stimulating, are to be preferred, cannot then become a question. The same treatment which is calculated to disperse the tumor will now facilitate and concentrate the process of suppuration, diminish pain, and often tend to produce a speedy, favorable, and spontaneous discharge of the matter formed. Perhaps, when such is the termination indicated, it is best not to interpose with an artificial opening, and, with careful and judicious attention and management, the abscess will not long continue to be troublesome afterwards, where the constitution is in good order. The accumulation of stagnant matter should be avoided while the original aperture remains open, and a mild emollient poultice applied thrice a day, accompanied with gentle and gradually increased pressure, is well calculated to promote the discharge of the pus, prevent the formation of sinuses, and encourage the adhesion of the parietes of the sac; and, when this cannot be brought about, but a

weeping orifice continues, the sac may be irritated, or even destroyed, by stimulants or escharotics.

In this stage of the secondary state, a generous diet, regular mode of life, and good air, are as essential to the patients as are a low diet and reducing measures in the primary state. But, if the progress of suppuration has not been accompanied by high inflammatory action of the parts involved, spontaneous discharge is either procrastinated or altogether avoided, and a soft fluctuating feel is presented to the touch, on applying the fingers to the surface of the bubo. We have then an opportunity of fairly employing surgical skill; and, in the choice of several means in our power, will probably depend the permanence and celerity of the cure. In some cases the quantity of pus becomes gradually diminished while poultices are being applied, but rarely entirely removed, although I have seen this effected. In such cases, where a languid state of the parts around exists, I have known the dispersion of the pus accelerated by repeated blistering. The same result may also be sometimes produced by the cautious and gradually increased pressure of a flannel bandage, passed across the tumor, and round the loins and thigh. I have also used, in similar cases, poultices mingled with mercurial ointment and soft soap, with benefit. But if there seems to be no indications of such measures effecting the removal of the pus, (and if the skin over the tumor be very thin, and the accumulation below large, these will not succeed, and the integuments will let out their contents,) it appears preferable to make an artificial opening in one of these modes, either by a simple puncture, a long incision, or the application of caustic so as to form a deep and wide eschar. Of these methods experience has taught me, certainly in general, to reject the first; for, though sometimes speedily successful, it most frequently entails a long continuance of the abscess in a state of secretion and discharge, requiring some trouble to manage. The two latter operations appear to be greatly preferable; and of these, perhaps, the formation of an eschar by caustic is the most effectual of the two, and the readiest mode of ensuring an entire and permanent destruction of the bubo, usually not long after the casting off of the slough. The manner in which I prefer applying the caustic is to rub the skin covering the bubo with the Kali purum dipped in a drop of water, till the parts to the extent of about a shilling are sufficiently affected to ensure the destruction of their vitality. An emollient poultice,

mingled with narcotic substances, will diminish the temporary pain from the action of the caustic, and facilitate the removal of the eschar formed, and part of the pus will flow out and part be conveyed away within.

Treatment of the third state of Bubo.

Unless the constitution be affected with any morbid diathesis, the parts exposed generally granulate and cicatrize speedily with the application of cold, astringent, or stimulating solutions, simple or digestive ointments, according to the appearances of the sore, in conjunction with pressure by a proper bandage, or of mild poultices should inflammation occur; while the carrot poultice may be useful if the ulcer take on a sloughing character.

When the parts treated with caustic recover from the first state of irritation into which they are thrown, the patient taking moderate exercise promotes, rather than impedes, the healing. An irritable state of the sore sometimes supervenes, and this seems greatly relieved by sedative and caustic solutions.

I have already considered the relation of the second, or suppurative, stage of bubo to the remote cause in a pathological point of view, and in my remarks on its treatment I have not been at all guided by any consideration of the necessity of regarding it as influenced by a specific virus. The leading principle of treatment required appears to be the same in all cases; the local means only by which the general objects may be secured varying according to existing circumstances.

I consider the distinctions between what are termed scrofulous and syphilitic buboes to lead to no practical result as to local treatment, nor indeed as to constitutional remedies, any further than, whatever may be the diathesis of the patient, and the constitutional state of irritation, debility or otherwise, we cannot reasonably expect the third state of bubo, or that in which it is opened, either naturally or artificially, to heal so readily without meeting the constitutional indications. These require it to be met, perhaps, by regulating the diet, improving the air in which the patient breathes, correcting the state of the digestive organs, and promoting health and strength by general means. When bark and acid agree with the stomach, and the decoction of sarsaparilla and extract do not nauseate or oppress the patient, very beneficial results appear to follow their use. Mercury, in every stage and state of bubo, appears to me to be generally inadmissible or useless,

excepting in the topical manner recommended, and indeed it is often injurious. Some obstinate sores may be improved in condition by the application of mercurial washes and ointment, and such I have often observed to be the case with those which follow the opening of buboes. The third state of bubo I would treat as I would treat any other case of ulceration rendered difficult to heal from scrofulous or any other diathesis; nor do I see any necessity or advantage likely to arise from considering the open buboes resulting from venereal complaints in any other light, or treating them upon any other principle than that of meeting their general indications, without reference to their remote cause.

It very frequently happens that the healing of open buboes is retarded by the presence of an enlarged gland in the centre of the sore, or towards one end. No remedies, constitutional or local, will then succeed in inducing entire and permanent cicatrization. The only remedy in this case which I have found to be effective is the destruction of the gland. The loss never entails the least inconvenience whatever; and the safest and most complete method of destroying it is by the periodical introduction of small pyramidal troches into its substance, composed of minium, amalgamated into solid masses about an inch long with solution of gum arabic. Their number should be gradually increased, and in a short time the gland will be thus removed from any further obstruction to the healing of the sore, which then readily takes place.

Concluding Remarks.

From the result of some years' observation and experience, I am led to conclude that the treatment of buboes needs not to be influenced by a consideration of the remote cause, until the sores established in their open state become affected by some constitutional diathesis, or morbid condition of irritability or otherwise, when the ordinary measures recommended for the alteration of the diathesis, or restoration of the system to health, will afford the most rational source from which the healing of the sore may be finally expected.

The mild or malignant character of a bubo I consider to be dependent on constitutional peculiarities and accidental circumstances; and, while its various phenomena require different methods and modifications of treatment, no advantage can be expected to result from any consideration of the remote exciting cause, any further than its removal as a

continued source of irritation while it remains. I would encourage the mild bubo with gentle means, irritate or stimulate the indolent bubo, and soothe and tranquillize the bubo of the malignant kind, and in all cases regard the constitutional diathesis as a frequent immediate cause of any difficulty which may exist in the final destruction or healing of the bubo, excepting where any such obvious obstruction as that of a diseased gland presented itself to my notice.

12, Great Marlborough street; May 15, 1829.

TYPHUS AND VARIOLA.

Account of the Typhus Fever, and fatal Epidemic Variola and Varioloid Disease, that prevailed in Halifax, Nova Scotia, in the Summer of 1827 and Winters of 1827-8. By WM. DONNELLY, M.D. Surgeon of his Majesty's Ship Hussar.

THE summer of 1827 and winter of 1827-8, were seasons of great sickness and mortality in the town of Halifax, arising chiefly from a wide-spreading typhus and a particularly fatal epidemic variola.

Both these diseases were introduced by emigrants from Ireland, three shiploads of whom arrived during the summer from Waterford, where they had been collected by the advertisements and agents of a Mr. Cook, to be transported *en masse*, men, women, and children, without a surgeon; and to be thrown, destitute of every thing, on the charities of a province to which they brought disease and death.

Typhus demanded the earliest attention. This disease had existed sporadically, but was rare, when, in July 1827, after the arrival of a second ship with emigrants, it began rapidly to spread through every part of the town, so that the poorhouse could not contain the cases requiring admittance, and it became necessary to establish a fever hospital. A barn belonging to a farm, called Bankhead, about a mile from town, was appropriated to this use.

To the helpless and destitute it was a great felicity to be admitted to this, the best accommodation that at the time could be afforded; yet it was a very defective asylum of disease. There were no windows, and light, air, nurses, patients, and physicians, entered by the capacious folding doors of the barn; the sick reposed on straw beds laid on the earthen floor, which were arranged closely together round the walls and in the middle of the floor; the bed-clothes were scanty. Medical attendance was gratuitous, but given with commendable diligence: and food, medicines, wine, &c. were furnished by the poor-house.

The above circumstances it is necessary to bear in mind, in reference to the results of the disease. The fever hospital was established with the hope of arresting its progress in town, and consequently patients were received from the emigrant ships, the town, and poor-house. Of those admitted, a few proved to be variola, and several only ephemeral fever. Two hundred and eighty only of the three hundred and sixty-one patients that were admitted from the middle of July to the middle of October, (the three months the house was open,) were really typhus; and of these, there died at Bankhead sixty-one, and thirty were sent to the poorhouse, on the hospital being shut up. Of the latter, fifteen were convalescent, and fifteen confined to bed, but likely to recover. So that, out of two hundred and eighty cases of typhus, sixty-one, or one in little more than four and a half, may be considered the proportion of mortality.

Men, women, and children, were received as patients at Bankhead. The number of the first was equal to that of both the latter. The proportionate mortality amongst the men was little more than that amongst the women; but the number of deaths of children, in proportion, was little more than half of that amongst either women or men.

The contagious nature of the fever was evinced by its being communicated to many of the inmates of the poor-house, who resided there from old age, or from their being afflicted with chronic or other complaints, shortly subsequent to the emigrants being first admitted from the ships, before Bankhead was appropriated to the fever patients. After this the poor-house did not get free from it for months, but sent cases from time to time to Bankhead; some of them the nurses and servants of the establishment. Also, again, on the convalescents returning to the poorhouse in October, typhus spread in quick succession amongst several of the poor there.

About the 20th October, a young man was two days in the house for an ulcer on the leg. His bed, during this time, was next to that of a typhus patient. Three weeks after, I saw him carried into the house with severe typhus fever. Of the nurses who attended at Bankhead, five caught the fever, and recovered, some of them with difficulty; and, of the orderly men, two were seized, both of whom died.

As late as the middle of December, there were six bad cases of typhus in the poor-house. Here the disease proved far less fatal than at Bankhead. It ran through the whole of ninety-one children, who were in the house at the time,

with only one death, though some of the cases were severe. This great difference in mortality is rather owing to the greater mildness of the fevers and the superior comforts of the house, than to any difference in the medical treatment; as, neither at Bankhead nor in the poor-house, did the cases seem to admit or to receive generally any systematic treatment, by bleeding or other particular remedy.

Many of the typhoid patients became completely yellow, and merited to be called icterodes, or, as far as colour has procured the title, yellow fever. Four such cases occurred also in the military hospital, and many in private practice; but these did not generally prove more fatal than the other typhoid cases.

The whole mortality from typhus during this epidemic, including the fever hospital and poor-house, amounted to between two and three hundred; and this was only an item in the general mortality amongst a population of from twelve to fourteen thousand. During the eight months from June to January (both months inclusive), between a fifteenth and sixteenth of the whole population died; it appearing from the account kept of the burials, that, in the first ten months of 1827, there were 814 deaths, though this included only five of the sickly months, and the last three continued to be as fatal as either of these.

No account being kept of the diseases which cause the deaths, the numbers from each cannot, with any certainty, be assigned; still there is no doubt the majority were victims to variola. The poor-house books furnish the best criteria for estimating as well the general mortality at the time, as that particularly from smallpox. The number of deaths in this asylum annually average from fifty to sixty-five, and 105 in 1826 was a mortality unequalled for years. In 1827 there were 248 deaths, not including the sixty-one at Bankhead. The number of cases of smallpox, all admitted from the middle of June, 1827, to the 10th March, 1828, was seventy-nine; of these, forty-one recovered, and thirty-eight died, being nearly a half.

In 1820 variola appeared in Halifax, but only fifteen cases then occurred, in consequence, it was believed, of the surgeons dividing the town into districts, and each gratuitously vaccinating that division to which he was appointed.

Unaccountably, when, in June 1827, this disease again presented itself, it attracted no such attention either of the physicians or magistrates, but was allowed to proceed uninterrupted by any general measure of prevention for six

months. Long ere this every part of the town was thoroughly infected, and the contagion was propagated to other vicinal parts of the province. At length the immense mortality aroused the magistrates, and about the middle of December a census was taken, the town being divided into twelve districts, and one assigned to each magistrate, to make at every house the inquiries with which he was furnished.

Some, I believe, executed this gratuitous labour with proper accuracy; but others, I know, were satisfied by calling at every door, and putting the questions to the person who first presented himself.

The only result derived from the aggregate of the numbers is, that in Halifax 2146 had been vaccinated; 1253 had had the smallpox in the natural way; 315 had neither had the smallpox nor been vaccinated; 50 had died of smallpox; 558 had had smallpox after vaccination; and 25 had died of smallpox after vaccination.

The good resulting from the census was a pretty general vaccination of all that remained unprotected, the surgeons performing this operation gratis to those that came; and to this may certainly in some degree be attributed the decline, in about a month after, of the epidemic, which had proceeded uninfluenced by the heat of summer or the cold of winter.

The facts observed during the epidemic are remarkable and interesting in the history of variola and vaccinia.

It may be well to premise, that, in the early part of summer, rubeola had prevailed to a considerable extent, and scarlatina in a minor degree; but, as the variolous epidemic advanced, these almost disappeared: and that, with regard to varicella, practitioners of Halifax say they hardly recollect a year to have passed of the last twenty without its being abundant, yet it was never known to originate variola. Indeed, except in 1820, as already mentioned, smallpox had not been in the town for twenty years.

In November 1827, varicella ran through the families of three officers, two of these physicians. In one family there were three children, one aged six, one three years, and the other seven months. In the eldest it appeared a fortnight earlier, a vesicular eruption, the vesicles distinct and widely separated, accompanied by slight pyrexia and general illness. After the third day the eruption died away.

In the second there was a (not numerous) distinct vesicular eruption on the face, neck, and chiefly the back; the vesicles small, containing a limpid fluid, and based by the

natural coloured (not inflamed) skin. The eruption was accompanied by feverishness, general illness, inappetency, and white tongue. On the third day the vesicles began to dry.

Three days later, the youngest child was more thickly covered with a similar vesicular eruption, from which, on being punctured, a limpid watery fluid exuded. On the third day, the vesicles began to dry on the face, yet on the fourth day some came out on the back. The latter did not dessicate before the sixth day. On the first, but chiefly on the second and third days, (especially at night,) this child was ill, feverish, and very fretful.

All the physicians who saw the disease just described unhesitatingly pronounced it varicella, and all the practitioners of Halifax, with whom I have conversed, state the dessication on the third day, and the little previous indisposition, as sufficiently diagnostic, even neglecting the other characteristics of the eruption.

With this disease primitive variola cannot possibly be confounded, and almost as little can its modification, the varioloid disease. This is characterized by its happening subsequently to natural or inoculated variola, or to vaccinia; by there being no secondary fever, and by the primary fever being generally less severe than that of variola; by the dessication of the pustules on the sixth day; by elevations, and not pits, remaining after the crusts fall off; by the absence of the peculiar variolous effluvium; and, lastly, by its comparative mildness.

In most cases such distinctions held; yet in many the disease, though subsequent to vaccinia or previous variolation, ran the regular course of variola, was severe, and in some even fatal; so that the previous disease did not invariably give occasion to the modification.

The facts unquestionably ascertained during the epidemic are, first, the occurrence of the modified variola (varioloid disease) after perfect vaccination, whether recent, more remote, or renewed, after perfect variolous inoculation, and even after previous accidentally contracted smallpox. Secondly, the occurrence of variola unmodified, consecutively to vaccinia and to variolation, whether from inoculation or smallpox accidentally contracted. Thirdly, of deaths from variola subsequently to perfect vaccinia, and to inoculated or accidentally acquired variolation. Fourthly, of legitimate variola from varioloid contagion; and vice versa.

Perfect secondary vaccinia was frequently witnessed, the

anxieties of parents leading them very commonly to repeat vaccination, for greater security to their children. On these occasions the surgeon often saw as perfect a vaccine disease as he had originally witnessed in the same subject. One surgeon estimated that not more than one in twenty took it the second time, but other observations induce me to believe that this is fewer than was generally the case.

Mrs. U., thirty years of age, who had contracted the smallpox when young, went through perfect vaccinia, feeling even generally indisposed for two days. Two other ladies went regularly through the vaccine disease, though they had had the smallpox from inoculation. Miss J., aged fifteen, was vaccinated a few hours after her birth, (variola at the time prevailing,) and the operation succeeded so satisfactorily that lymph was taken, to send to a distance. At six years of age she went through a varioloid disease, which was attended by the same characteristics as the present; and, during this epidemic, she had from vaccination so perfect vaccinia that I should not hesitate to say that by it alone she would be satisfactorily protected.

After smallpox had been introduced into the poor-house, and had spread extensively amongst the children, those who remained unprotected were vaccinated; some whilst inhabiting rooms nearly full of smallpox. In two I witnessed the co-existence of variola and vaccinia. One, on the eighth day of vaccinia, had the vesicle perfect, and at the same time a varioloid eruption, promising (as it proved) to be a very mild disease. In the other, the eighth day of vaccinia was the fifth of varioloid eruption; and the latter was distinctly pustular, some of the pustules desiccating; whilst the former also was pustular, very large, apparently not cellular, the vesicle seeming modified into varioloid.

I am not aware that, with regard to secondary vaccinia, vaccinia after inoculation, or variolation, and co-existent variola and vaccinia, numerous observations were made; but, respecting most of the facts previously stated, there is abundance both of popular and medical evidence.

First, of variola and varioloid disease after vaccinia. Here the public opinion was correctly and feelingly expressed in the following paragraph of a Halifax newspaper: "Opposed to the opinion of those who consider vaccination as a protection, is the melancholy condition of the town at the present moment (in December). Innumerable are the instances, and fatal instances, of failure of the vaccine inoculation in resisting the smallpox. We need not point to any particular family for proofs of this assertion: it

cannot be denied." Nor did any medical man attempt to deny it. Those to whom a proportionate number of the cases now alluded to did not occur were strongly disposed to attribute the ineffectual protection to imperfect or careless vaccination; but, before the end of the epidemic, these also were forced to confess that variola or varioloid disease had been witnessed by themselves, after their own pronounced excellent; and even recent, vaccinia. Not less than 130 such cases occurred to three of the principal practitioners. A proportionate number could not (simply from their more limited extent of practice,) have happened to all the other six or seven surgeons; so that the number stated in the census must be too high.

In many cases the surgeon could not verify, by the scar, the accounts of the parents, or in any other way, the genuineness of the vaccinia said to have preceded. Some, indeed, particularly those at or beyond the age of maturity, stated that the vaccination had been performed by women or countrymen. Yet certainly, in the majority, conviction of the genuineness of the vaccinia could not be refused; the proof being derived from the registers of the practitioners, their own recent recollections, the perfect scar, the parents' circumstantial accounts, &c.

In the army, all the men and children are carefully vaccinated, and regularly registered by the medical officers, of whose competence there cannot be a doubt. Yet the regiments quartered at this time in Halifax did not quite escape; though, amongst 1100 men belonging to three regiments, not more than a dozen cases occurred, and, except one, all were cases of mild varioloid disease, and all of them recovered.

Amongst the children of each regiment, the disease spread more. In one, ten cases occurred in a fortnight; and all these children had been vaccinated by army medical officers. Three of them assumed the variolous character, and two died. One of the latter had been vaccinated about three years before, by the assistant surgeon of the regiment. The other became ill on the thirteenth day of good vaccinia, and died on the eleventh day of the variolous eruption. It is worthy of mention, that a child, three months old, which was vaccinated at the same time as the last child, slept with this one and another ill of variola, and escaped entirely the disease.

Generally speaking, the disease after vaccination assumed the varioloid appearance, and usually its symptoms were so extremely mild as only slightly to indispose the patient,

particularly after the invasive fever; and, even where this had been sharp, the patients afterwards almost always walked about, confined to the house only by the unseemliness of the eruption, and as a caution.

The severe and fatal cases subsequent to vaccination assumed the regular and unmodified characters of variola. These formed a small portion of the whole of the cases that occurred after vaccination; one in twenty-two and a third, according to the census. But, as the numbers of varioloid disease after vaccination are to be reduced as many as might fairly be allowed for imperfect and nonprofessional vaccinations, (an inquiry not sufficiently entered into by the magistrates,) so a deduction must be made from the fatal cases for previous unsatisfactory vaccination. Of seven fatal cases of which I knew, the perfect vaccination of four only could be verified.

It was difficult to form an estimate of the number of persons vaccinated who took the disease. Some practitioners said one in ten, others one in twenty, and others one in four; each judging according to what had happened in his own practice. Of a whole family vaccinated, part would take the disease, and the others resist the concentrated contagion. When faith in vaccination had become shaken by the frequent consecutive occurrence of variola, there was some interest in finding out those who were proof against the apparently almost irresistible contagion. These, however, were very numerous, and some were remarkable instances of protection by vaccination, even when instituted subsequently to exposure to variolous contagion. One of these was that of an infant vaccinated just after birth, the mother being delivered whilst labouring under variola, of which she died. And here it may be stated, that, generally, every parturient woman having variola died, and every pregnant one aborted.

Before alluding to the occurrences of varioloid disease after variolous inoculation, it is necessary to state that vaccination had been practised in Halifax about twenty years, and that it was very generally received; at least, there appeared to be no prejudice in the minds even of the less informed against it; and that, consequently, inoculation, for not less than ten or fifteen years, must have been rare, and those protected by it, compared with the vaccinated, very few.

Notwithstanding this, not less than between forty and fifty cases of variola or varioloid disease occurred during the epidemic, secondary to inoculation or accidentally con-

tracted variola; and these generally were more severe than the disease consecutive to vaccinia. Indeed, one of the earliest deaths that happened was from a malignant variola in a woman, seventy years of age, who had been inoculated thirty-five years before, and that effectually, as was evident to every one by her being remarkably pitted. In the perfect confidence derived from this, she freely and voluntarily exposed herself to the contagion. In December, a man of colour died of smallpox, though he had previously had the disease; and there is little room for doubt that it was of secondary variola a child, three years of age, died about the same time, on the tenth day of the disease.

This child had gone through the primary attack only six weeks before. When, on the occurrence of the invasive fever of the secondary disease, suspicion of smallpox was entertained, the surgeon was shown several distinct pits behind the ears, and had a clear account, from the father, nurses, &c., of the three days' previous fever (in the former attack) and illness, of the appearance and progress of the pustular eruption; the pustules about 130 in number. The child they alleged to have then caught the disease from a person in the house very ill of variola.

Patients having the varioloid disease, and communicating unmodified variola to the unprotected, and the subjects of primary variola, whether the disease were mild or severe, producing in the inoculated or vaccinated the mild varioloid disease, were circumstances so common, that it is hardly necessary to mention individual instances.

In three apartments of a house with a common stair, I saw, belonging to three families, ten children in different stages of variolous or varioloid diseases. Here an unprotected child had accidentally contracted variola, and died. From this child the mother inoculated three others, two of whom had the disease mildly, but with a numerous eruption; and the third so severely as to cause the child's life for a time to be despaired of. The vaccinated children of the other two families were running about in the desiccating stage of a very mild varioloid. In this house only one vaccinated child resisted altogether the contagion.

The son and daughter, aged respectively sixteen and seventeen, of a tradesman, being exposed to variolous contagion, contracted the varioloid disease, and went through it favorably, suffering only from the invasive fever; but both had a copious eruption, which left elevations and copper-coloured marks, that remained for months. Whilst

under the eruption, they were visited by a druggist's apprentice, who, at the same time with them, had been vaccinated by his father, a surgeon. About ten days after these visits, the apprentice was seized with unmodified variola, of which he died.

A woman, aged twenty-eight, the wife of a tailor, contracted variola, and unexpectedly recovered. During her illness, the husband, aged thirty, who had had variola when two years of age, and who remained pitted in the face, attended upon her, and slept in a bed in the same small room. On the tenth day of his wife's disease, he became feverish, and continued so for two days, when a pretty numerous eruption appeared. This went through the varioloid course, and after the third day the patient walked about. In this family there was only one child, four years of age: he had been vaccinated, and he resisted the contagion, though constantly with his father and mother.

The men belonging to the ships-of-war that were at Halifax during the summer and winter, did not entirely escape. In the early part of October, a man, twenty-seven years of age, lately arrived from New Brunswick, and only a week before entered as a volunteer on board the Hussar, (after residing in Halifax a fortnight,) was seized with variola. On the first appearance of eruption, he was sent to the hospital. The disease proved confluent, and he died on the thirteenth day. On examination at entering, he positively stated that he had had the smallpox, as he had been assured by his mother; yet, on becoming ill, his confidence in this assertion seemed diminished.

The occurrence of this case rendered a particular examination of every person belonging to the ship necessary. From this inquiry it was found that, of 301 persons in or attached to the ship, 163 had had natural variola, 112 remaining pitted, and 51 not pitted; 88 had been inoculated, 7 remaining pitted, and 81 not pitted; 32 had been vaccinated, chiefly young officers and boys; 6 vaccinated or inoculated; 2 vaccinated or inoculated; and 10 remained who had no knowledge of having been inoculated or vaccinated, or of having had variola. These ten were immediately vaccinated, but only in four was the disease produced, the others resisting the virus, though the operation was in each six times repeated.

The account given during this examination by two marines satisfied me that at a former period they had had mild variola, notwithstanding preceding good vaccinia; and

there could be no doubt that one of the clerks, subsequent to inoculation so effectual that several pits remained, had had variola very severely, remaining greatly pitted.

On board the Alligator two men caught the disease: the first, aged twenty-one, was sent to the hospital, on the 27th November, with a mild varioloid disease, though the pustules were numerous. On his left arm there were two large good foreolous cicatrices, more resembling the scars after inoculation than vaccination, but he did not know whether he had been inoculated or vaccinated: that one or the other had been done, he was certain.

Six days after this man, the second, aged twenty-four, was sent to the hospital. This case proved confluent, was attended by delirium, the pustules never matured, and he died on the seventh day of the eruption. This patient stated, distinctly and positively, that, when fourteen years of age, he had had smallpox, which confined him to bed for three weeks.

The Ringdove being appointed to winter at Halifax, before she sailed from Bermuda, a careful investigation was instituted regarding smallpox, and the unprotected were vaccinated as soon as lymph could be obtained. Notwithstanding this, not long after her arrival, smallpox appeared on board: three were infected, and of these one died. The subject of this fatal case had been inoculated; he had a good scar on the arm, and some variolous pits.

Notwithstanding the occurrences narrated, vaccination was still anxiously sought for where it had not been previously had, and renewed, or at least re-attempted, in those who had been previously vaccinated; as much (indeed, I believe more,) from the almost certainty of its procuring a mild varioloid disease, should the person contract the smallpox, as to protect others from the wide spread of variolous contagion.

HOOPING-COUGH.

Observations on the Treatment of Hooping-Cough, and on the Use of Sulphate of Quinine in that Disease. By a SURGEON.

IN the beginning of 1828, on a homeward voyage from India, the hooping-cough prevailed in the ship of which I was surgeon. The number of children on board was seventeen, all of whom, with the exception of a girl who had had it before, were affected. The greatest age was eight years, and the youngest (if I mistake not) thirteen months. The contagion was communicated by a girl of four years, who was labouring under its influence at the period of our

embarkation, (Jan. 6.) The disease was severest with the younger, while the older suffered comparatively little. There was nothing new, as far as I observed, in the appearances which it exhibited; but, as I employed a remedy from which I think very considerable benefit was derived, and which I am not aware has hitherto been much, if at all, in practice, the result may not, perhaps, be unacceptable to the profession.

When unequivocal symptoms of the disease appeared, doses of ipecacuanha, according to the age of the patient, were given night and morning, so as to produce full vomiting. In the intervening time, a mixture of antimonial wine, laudanum, and sulphate of quinine, made into a draught with syrup and water, was given thrice a day, at intervals of five hours. The dose for a child of two years was three drops of the antimonial wine, one of laudanum, and half a grain of quinine. When the first, or contagious stage, was over, the quantity of the two former was diminished, while the latter was increased. Burgundy-pitch plasters were applied to the breast, and between the scapulæ. The bowels were kept moderately open by calomel and rhubarb; the diet was light and nutritive. This treatment was generally successful in about a month.

There was an interesting boy of three years who suffered extremely. The convulsive paroxysms were violent, and the quantity and tenacity of the mucus such as threatened suffocation. He was reduced to such a degree, that (to use his nurse's phrase) he was a mere "bag of bones;" yet, by a steady perseverance in the above treatment, his recovery, though late, was yet complete. Several expedients to divert his attention, by play, toys, &c., were of use as auxiliaries. The quinine in the second stage was decidedly beneficial; and it is in this stage, where the disease is supposed to remain in the system merely from the power of habit, that the exhibition of tonics, and above all the quinine, is indicated.

I was induced to make trial of this medicine from the great approbation with which Dr. CULLEN mentions the virtues of Peruvian bark in this disease. "I consider the use of this medicine," says he, "as the most certain means of curing the disease in its second stage; and, when there has been little fever present, and a sufficient quantity of the bark given, it has seldom failed of soon putting an end to the disease."* In the cases that came under my obser-

* Cullen's Works, by Thomson, vol. ii. p. 463.

vation, there was little or no fever; and I should think, from the small bulk and the soluble nature of the quinine, that a sufficient quantity can be given, without the inconveniences attending the exhibition of the bark.

I have said that the quinine, in the second stage, was decidedly beneficial: it certainly appeared to me so; yet, perhaps, I ought to qualify the expression. In estimating the effect produced on diseases by remedies, it is difficult to determine with precision the exact share which these have, apart from adventitious circumstances, in bringing about a favorable termination. In the present instance, the state of the atmosphere appeared to exercise considerable influence over the disease. During moist, hazy weather, the expectoration was more copious and viscid, and difficult of separation. When the air was hot and dry, it was scanty, the cough more distressing, and in one or two instances streaked with blood. Between the tropics, and during the prevalence of the trade-winds, when the weather was fine and clear, it was particularly mild. How much we are to attribute to the state of the atmosphere, I know not: one thing, however, will, I think, be granted, that the constant succession of climate that is experienced during an Indian voyage will rather have a salutary than an injurious effect upon the disease.

Should the use of the quinine in hooping-cough prove efficacious in the hands of other practitioners, I shall feel gratified. It deserves, at least, a fair trial; and it is exempt alike from danger and inconvenience.

DR. BALLINGALL'S CLINICAL LECTURE.

Review of some of the Surgical Cases which have lately occurred in the ROYAL INFIRMARY of EDINBURGH. A Clinical Lecture delivered to the Students of Surgery in that Institution, on Thursday, 26th February, 1829, by GEORGE BALLINGALL, M.D. F.R.S.E.; Fellow of the Royal College of Surgeons, Surgeon Extraordinary to the King, Regius Professor of Military Surgery in the University of Edinburgh, and one of the Surgeons to the Royal Infirmary.

GENTLEMEN: In commencing a retrospect of the fifth course of Clinical Lectures, which, as the senior attending surgeon of the house, it has become my duty to conclude, I would, in the first place, direct your attention to some of the accidents and acute cases which you have had an opportunity of witnessing during the last four months.

Of the acute cases, the fractures of the limbs have, upon the present, as upon former occasions, constituted a large

majority; of simple fractures I find that there have been treated, on my side of the house, twenty-six cases, all of which have either terminated successfully or are in the progress of cure, with the exception of that of William Fernie, æt. sixty-two, who was admitted on the 3d of January, with a fracture of the neck of the femur. This man was brought from Kinglassie in Fifeshire, where he had met with the accident about ten days before. His limb was immediately placed in Boyer's splint, and was extended to the same length as its fellow on the opposite side; but, although the old man complained of no inconvenience from the apparatus, it was soon perceived that ulceration had taken place on the sacrum to a considerable extent. This induced me to remove the splint, and to place the patient on his side. Here again a gangrenous spot appeared over the trochanter of the right thigh, and the patient was subsequently turned to the opposite side; my object now being to obviate the effects of pressure and the extension of the gangrene, rather than to look for any successful treatment of the fracture. The ulceration, however, continued to extend, and the patient's strength to sink, notwithstanding the liberal exhibition of animal food, porter, and wine, until the 4th of February, when he died, six weeks after the receipt of the injury; and I regret to say that the body was immediately removed to Fife, without affording us an opportunity of examining the state of the broken bone.

In the cursory observations which I have had occasion to lay before you on the subject of fractures, I have always inculcated the necessity of giving your attention to the general principles on which fractures are treated, observing that the variety of these accidents is so endless as to render it a matter of impossibility to be previously acquainted with the specialities of each individual case. My views of the treatment of fractures of the neck of the femur I explained to you from one of my printed Lectures, and I would now only observe, that the result of the foregoing, as well as of some other cases of the same kind which I have witnessed, has made me lately disposed to question whether we would not do well, in many cases of fracture of the neck of the thighbone, to be satisfied with the simple treatment recommended by Sir A. COOPER: to place the limb in a relaxed position, with a folded pillow under the knee-joint, and to take our chance of such a cure as nature may be pleased to afford us, rather than, by confining the patient in a coercive apparatus, to run the risk of inducing ulceration or gangrene; the progress of which, in advanced

life, or in broken constitutions, it is so little within our power to control.

Of the cases of compound fracture occurring during the present course, that of Margaret Thomson, æt. seventy-four, who was admitted on the 3d of November, having both bones of the fore-arm broken, terminated fatally with symptoms of effusion into the thorax, four days after her reception into the hospital.

A case of compound fracture of the leg presented itself in the case of John Hamilton, æt. fourteen, who was under treatment in the early part of the season, in whom the cure was considerably advanced previous to the commencement of the course, and who was eventually dismissed cured on the 21st of December, after a confinement of upwards of twelve weeks.

The only other case of compound fracture which has been under my care during the present session was that of Alexander Kerr, æt. twenty, whose case was of a very severe and dangerous character, and of which the following particulars are recorded:

"Admitted, October 6th.—The whole left leg is very much swelled, tense and painful. About an inch and a half above the ankle, there is a small wound upon the anterior surface of the tibia, and the skin above the outer malleolus is very much contused, and fluctuates from the effusion of blood beneath it; when the foot is forcibly moved, an indistinct crepitus is felt. About eight o'clock this morning he was overturned in a cart, the edge of which fell against the lower part of his leg, whilst the weight of the horse was resting against the shaft. Limb was placed on M'Intyre's splint, and the spirit lotion applied."

Took an anodyne draught at bedtime, and a dose of oil on the following morning. The spirit lotion was continued to the leg, and an antimonial solution administered internally from time to time. On the 8th, gangrene began to appear, and the following report was entered:

"Slept ill; pulse 108, very full and strong; bowels once relieved; tongue slightly furred; skin upon the outer side of the leg is evidently gangrenous, and that upon the inner side considerably discoloured. An incision was made through the former, some serum was discharged, but the wound bled very little. He was bled to twenty ounces.

"Eleven o'clock.—Pulse 132; gangrene does not appear to have spread on the outside, but the skin upon the inside is more extensively discoloured.—V.S. ad 3x.

"9th.—Slept a little; pulse 112, not so strong; skin hot;

less thirst; bowels once relieved yesterday; gangrene has not spread at all upon the outside of the limb, and there is some healthy purulent discharge from the incision made yesterday; on the inside, the gangrene has certainly spread a little. Last blood drawn neither buffed nor cupped."

The fermenting poultice was applied to the leg, and the antimonial solution continued internally. His feverish symptoms now began to subside, and on the 11th it was reported that "his pulse was 100; skin cool, tongue less furred, appetite returning; gangrene had ceased to spread, but the sloughs had not begun to separate."

It now became obvious that we should not be compelled to amputate by the extension of the gangrene, but, when sloughs came to be detached, and both the tibia and fibula were laid bare to a considerable extent, with a copious purulent discharge, and rather profuse sweats, I was greatly inclined to amputate the leg; and, had not some of my colleagues entertained a more favorable opinion of the case than I did, it is probable the operation would have been proposed to him.

There was great encouragement, however, to persevere in our attempts at a cure, from the prosperous state of the man's general health, as well as from his youth and apparently vigorous habit. The extensive sore which nearly surrounded the lower part of the limb became covered with florid and healthy granulations; the discharge rapidly diminished; and on the 21st December he was discharged cured, a trifling exfoliation having previously taken place from the fore part of the tibia.

Of compound fractures I have hitherto said but little in these lectures, nor do I now propose to enlarge; for, although in the two cases just mentioned you have witnessed a successful termination under the treatment adopted, yet they are, upon the whole, a class of accidents, the results of which have been to me the least satisfactory of all that I have had occasion to treat in this house, and are not co-incident with my experience of them in other situations.

Had these results been the consequence of one uniform mode of treatment, I should naturally have concluded that that treatment was erroneous. But, when I look back to the mode of dressing the wounds, sometimes by a piece of lint soaked in blood, and allowed to form an incrustation over them; sometimes by covering them with a paste of gum or a pledgit of simple dressing, and sometimes by bringing their lips into accurate apposition with adhesive straps: when I look again to the different positions in which

the limb has been placed, either closely enveloped in splints, lying less constrained in a fracture box, or simply resting on a pillow, sometimes in the bent, sometimes in the extended position; and when I look also to the various means taken to subdue the violent inflammation and high symptomatic fever accompanying these injuries; by general or by local bleeding, according to circumstances; very frequently by the use of cold evaporating lotions to the seat of the injury, and sometimes by the use of anodyne fomentations or cataplasms: I cannot admit that the unfavorable results which I have so often had occasion to deplore have been attributable to any bigoted prejudices or exclusive partialities in the mode of treatment.

In my remarks upon this subject, I took occasion to observe that we are greatly in want of a work on these accidents, from some surgeon of varied and extensive experience. I say varied experience, because it appears to me that we are often led, by the irresistible force of habit, to give our attention too exclusively to one mode of treatment. I remember to have heard an hospital surgeon assert that he never expected to lose another case of compound fracture, by following up the practice, which seemed to him to be a new one, of closely enveloping such fractures in splints and bandages, without undoing them for weeks together.* But it is not from those who take such a limited or exclusive view of this matter that we are to expect such a work as I could wish to see, but from those who are capable of discriminating between those cases (perhaps numerous ones) in which the above practice is advantageous, and those in which it is not only injurious, but absolutely insufferable.

Before quitting this subject, I would beg leave to mention that there are two points in the treatment of compound fractures upon which my own observation has led me to form a very decided opinion, and to offer you a remark which may possibly prove useful hereafter. I have, I think, too frequently seen a reluctance to use the saw in removing the protruding extremities of the bone, when these were either difficult to reduce or of a sharp and spicular form; and I have, I think, sometimes seen the closure of the external wound attempted by means too forcible and too long continued.

Among the more severe accidents requiring amputation

* The Orientals adopt a somewhat similar mode of practice. Vide London Med. and Phys. Journal for February 1829, p. 175. Baron Larrey, we believe, treats simple and compound fractures in this manner.

which have occurred during the present course, that of Robert M'Gregor, æt. fifteen, deserves particular attention. This lad was admitted late on the evening of the 28th of January, and the following notice of his case entered in the journal:

" Had his right arm drawn into the machinery of a paper mill at five P.M. The arm was torn off from the body above the middle of the humerus. The extremity of the bone projected out from the muscles. The laceration extends on the inner side of the arm into the axilla, destroys the inferior margin of the pectoralis major and latissimus dorsi muscles. The skin, for a short way on the back of the scapula is destroyed, and also a considerable part of the clavicular portion of the deltoid.

" The artery is seen pulsating about three inches from its end, which is closed by coagulated blood. No hemorrhage had taken place; his extremities were cold, and pulse feeble."

The operation at the shoulder-joint was performed by Dr. CAMPBELL, who succeeded me in the active duties of the house. A single flap was made from the deltoid, which completely covered the wound; four vessels were secured, and an opiate administered. The patient had a good night after the operation, and no untoward circumstance occurred until the night between the 1st and 2d of February, when a secondary hemorrhage took place, which is thus noticed in the journal:

" About ten P.M. there came on a considerable hemorrhage from a small vessel, which was tied; and, about half past two this morning, the ligature came away from the axillary artery, and hemorrhage ensued. The vessel was immediately secured; a considerable quantity of blood was lost. Pulse about 130, stronger than yesterday evening. An anodyne was given.—Cont. H. Anodyn. cum T. Opii, gtt. xxxv."

For several days after this the patient appeared to be in considerable hazard: some sloughing took place from the edges of the wounds, with a copious discharge of ill-conditioned matter; his pulse varying from 125 to 150, with occasional rigors and profuse sweatings. He was treated chiefly with the free exhibition of opiates, beef-tea, and small quantities of wine occasionally; the wound being dressed daily with resinous ointment.

On the 7th, he is reported to have taken "ten ounces of wine since yesterday morning; about midnight, having had no sleep, fifty drops of Tr. Opii were given, and he slept

soundly for several hours; one natural stool; pulse 128, of moderate strength; tongue clean; feels much better.—Habeat Vin. rub. ℥xij., et Haust. Anodyn. p. r. n. An egg for dinner daily.”

From this period, the cure went on progressively, the lad's looks improved daily, while the wound assumed a more healthy appearance; the discharge gradually diminished; and he may now be considered as out of danger.

In my comments upon this case, I considered it as illustrative of three important points: the spontaneous cessation of the hemorrhage, in cases where limbs have been torn from the trunk; the question of primary and secondary amputation; and, lastly, the mode of performing this operation at the shoulder-joint.

In illustration of the first point, I showed you the portion of the humeral artery which was removed along with the remains of the arm, the internal coat of which was in some points slightly lacerated, while the external coat was over-stretched, and a considerable portion of it filled with coagulum. I referred, for further illustration of the state of arteries after accidents of this kind, to a case detailed in the nineteenth volume of the *Edinburgh Medical Journal*, by Mr. LIZARS; and to a very valuable paper, containing indeed all the information which we possess on this interesting subject, by Professor TURNER, in the *Medico-Chirurgical Transactions* of this place. By the kindness of this last-mentioned gentleman, I was also enabled to show you some drawings, exhibiting the state of arteries in accidents of this nature; where, in some cases, we find their internal coats completely torn through, and corrugated, or coiled up, as it were, within the vessel, so as to prevent the effusion of blood.

On the subject of primary and secondary amputation, we now possess a series of valuable observations, from the time at which it was made the subject of a prize-question by the French Academy in 1756, down to the present day; when the advantages of primary amputation are, I believe, admitted by every practical surgeon, who is now enabled to add to his own experience that of the French army surgeons, as detailed in Baron LARREY's writings; that of the English army surgeons during the peninsular war, as detailed by Mr. GUTHRIE and Dr. HENNEN; and that of the naval surgeons, as detailed in Mr. C. HUTCHISON's work. One of the most striking illustrations of the successful issue of primary amputations, is contained in an extract from a report made by Dr. BURKE, inspector of hospitals to his

Majesty's forces in Bengal, which has been made public by my friend, Mr. ANNESLEY, in his splendid work on the Diseases of India. Dr. Burke states that, "of eighty cases of amputation," performed at Bhurtpore in Upper India, "the whole recovered in fourteen days."

We must not, however, expect to meet with the same proportional success in the amputations performed in civil hospitals: at least, I am entitled to say, that the contrast between the success of primary and secondary amputations, during the time that I have served in this house, has by no means resembled that which I was accustomed to see and hear of in the army. For these different results in military and in civil hospitals, many reasons might, I think, be assigned; some of them more satisfactory than those mentioned by SANSON, who, in a recent paper upon this subject, has noticed the fact, but has, I think, failed to give a very luminous or satisfactory explanation of it.

In speaking of the operation at the shoulder-joint, I remarked that, although this operation has undergone many modifications, to some of which the names of Morand, La Faye, Le Dran, Larrey, Lisfranc, Broomfield, Alanson, and others, have been attached, yet these may all be resolved into two modes of proceeding, either by forming a superior and inferior, or an anterior and posterior flap. I have myself operated in both ways, but not sufficiently often to enable me to institute any fair comparison as to the best mode of operating: I may, however, be permitted to remark that, in a very large proportion of the cases requiring amputation at the shoulder-joint, the soft parts are so lacerated as to leave us no choice, but to compel us, as in the present case, to form the flaps as circumstances best will admit. We are now well aware that the apprehension of an uncontrollable hemorrhage, which alarmed our predecessors, and made them slow to adopt this operation, is altogether unfounded: the bleeding may always be controlled by firm pressure above the clavicle by the hands of a steady assistant; and, in fact, this compression, as my distinguished predecessor, Dr. THOMSON, observes, has been found "easier in practice than it appeared to be in speculation." It is necessary, however, to remark, that, at the moment of cutting through the axillary vessels and nerves, the patient is apt to give an involuntary start, and may throw the fingers of the assistant off the artery; an accident which once happened to a gentleman assisting me in this operation, and by which I nearly lost my patient. I was

for a moment completely blinded by the discharge of blood into my eyes from the open axillary artery.

Another case in which primary amputation was thought advisable during the present course, was that of Charles Cuthbertson, æt. seventy-one. This old man was admitted on the 18th of December, with a comminuted fracture of the radius and ulna at their carpal extremities, and an extensive lacerated wound of the left wrist. He had also received a severe contusion in the lower part of the back, with a fracture of some of the ribs. Although (as I stated to you in the theatre at the time of the operation,) I entertained little or no expectation of this man's recovery, I determined, after a few moment's consultation with my colleagues, to remove the arm a little below the elbow. It was obvious, however, at the first dressing, that no prospect of union existed: the lips of the wound, instead of presenting that wholesome turgidity and tension which presents itself in a healthy stump, were flaccid, somewhat livid, and apparently tending to gangrene; the smaller vessels (if I may use the expression,) had not taken up, but had poured out a quantity of grumous blood, which flowed through the dressings; at the same time the patient began to complain of oppressed breathing and symptoms of inflammatory action within the thorax; so that he had to contend with all those difficulties which you may suppose to exist in the case of an old man labouring under acute inflammation within the trunk, and gangrene in one of the extremities. Amidst a choice of evils, the abstraction of a limited quantity of blood was tried, but without any good effect, and the patient died during my temporary absence in London, about eight days after the receipt of the injury. No report of the dissection appears to have been entered in the register; but I am told that the whole of the ribs on the right side, with the exception of the two inferior ones, were found fractured, and some recent deposition of lymph on the pleuræ.

This case I am induced to mention, not from any very instructive lesson to be gathered from its progress, much less for any thing very unexpected in its event, but as a caution against an accident which occurred during the operation. While passing the knife through the forearm, from the radial to the ulnar side, for the purpose of forming a posterior flap from the extensor and supinator muscles, its point slipped between the bones, which rendered it necessary to withdraw it, and to pass it more carefully behind the ulna: this was, perhaps, owing partly to my own inadvertence to the exact position of the bones, but

partly, I believe also, to the connexion between the lower extremities of the radius and ulna having been broken up, so that, in pressing the knife close to the back of the radius, with the view of obtaining a sufficiency of muscular substance to form a good flap, the parallelism of the two bones was in some measure destroyed, the radius was pressed forwards, and the interosseous space thus presented to the point of the knife.

[To be continued.]

HERNIA CEREBRI.

Case of Hernia Cerebri, successfully treated by the Sponge Compress. By J. W. HEUSTIS, M.D. of Alabama.

ON the 26th of March, 1828, I was called upon to visit a negro boy, about eight years of age, who had received an injury of the head. The day had been extremely windy, and many of the old dead trees in the plantations had been blown down. The subject of this article being at work in planting corn, was struck upon the head by the falling of a limb of a tree, and knocked senseless to the earth. I found him in a state almost insensible, with frequent vomiting; pulse small, and the right eye closed. The wound was situated on the inferior and anterior angle of the left parietal bone. Upon extending the opening with a scalpel, and turning up the flaps, there appeared a depression of bone, of about the size of half a dollar, pressed down upon the brain, to the depth of about a quarter of an inch, and much splintered and shattered at the circumference. I sawed across the base of the depressed portion with Hey's convex saw, and then succeeded in elevating and removing it without having recourse to the trephine. Several small pieces of bone were driven into the substance of the brain, and were removed with the forceps. After the operation he was able to speak, which he could not do previously.

I saw him the third day after the operation: there was then no untoward symptoms. I did not remove the dressings; and, as there was some fever, I directed his bowels to be kept open with salts.

Five days after the operation I dressed the wound, which showed a disposition to become fungous: I made use of the common dressings. At the next visit I found that the fungus had protruded the opening in the skull to about the level of the integuments; I therefore removed it with the knife. From this time the growth of the fungus was rapid, so that I was under the necessity of removing it

every two or three days. I at length came to the conclusion of letting it remain, and take its own course, agreeably to the advice of Mr. ABERNETHY. I soon, however, had reason to alter my plan; for the fungus continued to increase, and its vessels anastomosing with those of the integuments, made its growth still more rapid, producing at the same time an absorption of the scalp upon which it pressed, and a corresponding deficiency of the integuments. I now resolved to have recourse to pressure. For this purpose, having sliced away the protruding fungus to a level with the inner surface of the cranium, I applied to the wound the common dressings, lint spread with basilicon, and over this a piece of dry pressed sponge. All this was confined with a bandage passed moderately tight around the head, and under the chin, and secured by a cap.

As the patient lived several miles distant, I directed the nurse to dress the wound in the same manner, till I returned. At my next visit, two days afterwards, I found that the fungus had not increased, though, from the neglect of the nurse in suffering the bandage to become slack, but little diminution had taken place. I now increased the pressure as much as the patient could comfortably bear, and directed the attendants to continue it as long as the fungus should show a disposition to rise. Four days afterwards I visited him again, and now found that the fungus had entirely disappeared, and its place occupied by a hole in the substance of the brain as large as a hen's egg. The surface appeared healthy, being of a whitish flesh colour, and covered with a glairy exudation; the arterial pulsation had also considerably abated. I ordered all washes to be discontinued, and a simple plaster of basilicon to be applied over the hole in the cranium, guarded with the bandage and cap. I saw him no more for a week or ten days: the whole was then filled up with a healthy deposition, and the wound in a fine, healthy, and healing state. I have since learnt that this patient has perfectly recovered.

Since writing the above, I have seen, in this Journal for August 1828, p. 492, a notice of a case of Fungous Cerebri, successfully treated by Professor DUDLEY on the same plan. This method of treatment by Professor Dudley had been previously mentioned to me by my young friend, Dr. BENJAMIN R. HOGAN, of Selma; and I must do Dr. Dudley the justice to say that it was upon this information that I had recourse to pressure in the case above mentioned. I had previously deliberated with myself on the propriety of this practice, but was deterred by the unfavorable ac-

counts respecting it recorded by surgical writers. These successful instances, however, are sufficient to authorize a further trial, and may serve to remove any existing prejudices in relation to this mode of treatment. Other means I had tried without success: the use of the knife gave no check to the morbid action, and was entirely unavailing; and caustic and strong styptic applications are in such cases inadmissible. Pressure, indeed, seems to be the only remedy that we can safely rely on with any prospect of success. Some caution may be necessary, in its employment, not to make it so great as to create pain or uneasiness, nor to continue it too long. The length of time, however, that it may be necessary, will be determined by the effect. When the disposition of the fungus to protrude has ceased, and the granulations sink below its proper level, pressure is no longer necessary. The unsightly cavity left in the brain after the removal of the fungus by pressure, might excite the apprehensions of the inexperienced practitioner; but this is a circumstance of no moment: no unfavorable symptoms are occasioned by it; nature is fully competent to the work of regeneration, and in the brain this process appears to progress with more rapidity than in any other part of the body.*

HOSPITAL REPORTS,

(Principally condensed from various Periodical Publications.)

ST. GEORGE'S HOSPITAL.

Case of lacerated Wound of the Thigh.

GEORGE JACOBS, aged twelve, was admitted into the accident ward in this hospital, on Monday, May the 4th, with severe and extensive lacerated wound of the right thigh, occasioned by a heavy piece of timber having fallen on the limb, six or seven hours previously, at Twickenham. The laceration extended from half-way up the outside of the thigh to below the knee-joint; the fascia lata was extensively denuded, and in several places torn through, together with the vastus externus muscle. About the knee was some glairy fluid; but whether it came from a wound of the joint or merely from the supra-patellar bursa, could not be ascertained. The edges of the skin were separated transversely for two or three inches, but there appeared to be no loss of it. The pulse was weak, and the skin cold. The wound was dressed with lint and

* American Journal of Medical Science.

the many-tailed bandage; and a little wine given to rouse the patient.

Mr. BRODIE, at his next visit, disapproving of this mode of dressing, applied three or four broad straps of adhesive plaster, without any intervening lint, so as to bring the edges of the skin in some degree into apposition. The limb was rolled with the common roller, and laid out, gently semiflexed at the knee, upon pillows.

On the 5th, he was ordered salines, with Sulphate of Magnesia at bedtime. *Vini rubri Oss. ter die.*

6th.—The pulse is frequent, the skin hot, and tongue furred. He was bled to ζ vi.; and, as his bowels had not been moved, he was ordered, Calomel gr. v. statim sumend.; *Haust. Sennæ ζ i. post horas duas. Rep. Mist. vespere. Ol. Ricini ζ ss.*

7th.—Hot and thirsty; tongue white, pulse quick; bowels have not acted. (The senna occasioned sickness.)—*Rep. Ol. Ricipi.*

8th.—Much the same; hot, restless, and irritable, with anxious countenance and feverish look. There is a free discharge of fetid matter from the wound. The bowels have acted freely.

9th.—He is still in the same unfavorable condition as far as the constitutional affection is concerned, which partakes much more of the irritative than the inflammatory stamp, the skin being hot, tongue white and dry, pulse quick and irritable. Matter having collected at the under part of the thigh, a counter opening was made for its discharge in that situation.—*R. Haust. Salin. cum Vinæ Antim. tart. \mathfrak{m} x. sextis horis.*

Next day, his bowels were again confined, and he required another dose of castor oil. Great irritation of the system; face remarkably fallen and anxious; the discharge copious, and extremely offensive to the smell.

11th.—The cellular membrane above the fascia of the leg, at its inner side, is in a sloughy state; as is also the fascia itself at the lower part of the thigh; added to this, a considerable quantity of matter has collected in the ham and around the knee-joint; the leg is swollen, skin discoloured, and a vesication has formed over the inside of the calf. Mr. Brodie made two or three very free incisions where the skin and subcutaneous textures appeared to have suffered most, and gave issue to a large quantity of fetid matter mixed with slough. The wounds were dressed with simple cerate spread on straps of linen; and he was ordered the following medicines: *Haust. Salin. cum Liq. Opii Sed. \mathfrak{m} v. sextis horis.*

12th.—He appears to be in much danger. The pulse is rapid and weak; tongue dry, but not brown; face sunken, with a hectic flush upon the cheeks; occasional rambling; great depression. The discharge very copious; sloughing does not appear to be extending. The symptoms, indeed, are rather of a hectic than typhoid character.—*Rep. Haust. Salin. cum Liq. Opii Sed.*

13th.—Something better today; skin cooler, tongue cleaner,

pulse less frequent; discharge from the wound becoming healthy, though very abundant.

On the next day he was little altered, save that the depression seemed gradually increasing.

15th.—Has vomited two or three times; pulse very quick, small and feeble; bowels open; discharge from the leg very great. In several places the fascia and cellular membrane form sloughs, that have not yet come away, intermingled with pus and dirty-looking granulations.—Ordered to leave off all his medicines, and to take beef-tea; Liq. Opii Sed. \mathfrak{m} xx. at bedtime; Vini rubri Oss. Porter Oj. quotidie.

16th.—Evidently sinking fast: pulse rapid and sharp; tongue brown; face hippocratic; mind wandering; the toes are bluish and cold. Vomited again in the night, but no rigor could be traced. Belly rather tense, and painful upon pressure.

He died at seven A.M. of the 17th, vomiting a quantity of coffee-ground matter in the very act of dying. The nurse distinctly states he had no rigor.

Post-mortem Examination.—The thoracic and abdominal viscera were sound. The foot was mottled in appearance, with small vesications about the ankles. The knee-joint did not appear to be opened into, but, on exposing it, the inner surface was found in much the same sloughy-looking state as the external parts. The capsule at the upper part seemed to be destroyed, and the joint to communicate with a sloughy abscess in the centre of the crureus muscle. The cartilages were not ulcerated. The fibula was broken, about the junction of the middle with the upper third, and its head was quite dislocated backwards from the tibia. There was still another fracture of the fibula lower down. The head of the bone must have been exposed in the sloughy abscess of the soft parts, which was very extensive, reaching from more than half-way up the thigh to the same distance down the leg, and in various directions. The muscles appeared to be sound immediately beyond the disorganized parts.

Compound Fracture of the Leg.

WILLIAM NORRIS, aged seventy-five, admitted into St. George's Hospital, May 1st, under the care of Mr. BRODIE. Tibia fractured obliquely a little below the middle of the leg; fibula fractured lower down; two small wounds of the integuments on the inner side, communicating with the fracture of the tibia; not much extravasation around. The injury was inflicted by the wheel of a coach passing over the limb. The patient is a hale-looking old man.—Leg placed in junk. Lot. spirit.

On the 2d, the fracture-box was substituted for the junk. For the first four or five days the leg was easy, and nothing particular occurred.

6th.—As his bowels were a little confined, he was ordered

Haustus Sennæ. In the course of the day he was observed to be incoherent, and in the night was so delirious as to require confinement. He took Tr. Opii gtt. xv. and twenty drops more in the course of an hour.

Next morning he was quieter; pulse weak, skin cool, tongue clean; no headach. Being rather low, he was ordered Vini rubri ζ iv.; Haust. Cinchonæ ζ i.; Consec. Aromaticæ \mathfrak{D} ss. ter die.

On the 8th, the pulse was stronger, but intermittent; no delirium. Slept without opium.

9th.—A dark-coloured erysipelatous blush, which appears to implicate the cellular texture as well as the skin, occupies the leg from the ankle to the knee.

11th.—The cellular membrane was now in a sloughy condition, for a considerable distance up and down the leg, especially on its inner side; the skin was of a dark, dusky, red tint; foot warm; no gangrene, but the cuticle about the centre of the tibia separated by vesication from the cutis. He rambles at times; pulse weak, tongue clean. Took table-beer, wine, middle diet, and Tr. Opii gtt. xv. h. s. Cold lotion was applied to the part. Incisions were made at various times in the leg down to the cellular membrane, and sloughs of that, mixed with foul purulent matter, evacuated.

The state of the limb was little ameliorated. The erysipelatous blush extended up the thigh on either side for three or four inches above the knee, but the sloughing of the cellular tissue appeared to be confined exclusively to the leg. The foot and limb always retained their natural temperature. During this local affection of the parts, the pulse was rapid and weak, the mind wandering, but at no period since the 6th was there actual delirium; tongue dry and brown; features sunken. He was ordered Haust. Cinchonæ ζ iss.; Consec. Aromatica gr. xv.; Tinct. Opii \mathfrak{m} v.; Amm. Carb. gr. v. ter die. Porter Oj.

13th.—Vini rubri Oss. quotidie. Amm. Carb. gr. v.; Consec. Arom. gr. xv.; Liq. Opii Sed. \mathfrak{m} x.; Aqua ζ iss. ft. haust. sex. hor.

On the 14th, Mr. Brodie made some more incisions, giving issue to foul pus, and exposing the rotten subcutaneous textures. The patient was evidently sinking. Ordered an ounce of brandy in addition to the other stimuli.

On the 17th, he was plainly in *articulo mortis*.

18th.—Died early this morning.

Sectio cadaveris.—The limb was not in a state of gangrene, but the greater portion of the anterior aspect of the leg, for more than its middle third, was sloughy. The tibia, throughout the greater part of this extent, was exposed, but not denuded of its periosteum, which was vascular and inflamed. The muscles below the sloughy part were sound, but remarkably congested with black blood, as if that were a state preceding the actual sloughing. The mischief was mainly confined to the superficial cellular texture. The fracture of the tibia was oblique, the lower portion was comminuted, but the fracture apparently did not pass into the

ankle-joint. The foot was a good deal tumefied, the skin discoloured, and the cuticle separated in one or two places by partial vesication.

The thoracic viscera healthy, and also the abdominal, with the exception of the liver, which showed symptoms of the dram-drinking degeneration. The aorta was dilated at its arch, especially at the convex part of it. About the dilated portion were two large patches of atheromatous deposition, apparently between the outer and middle coat.

Remarkable Instance of the Constitutional Nature of Fungus Hematodes.

On the 24th of last April, the dissection of Mary M'Carthy, ætatis thirty-two, took place in St. George's Hospital.

Head.—On turning down the flaps of the scalp, there appeared upon the calvarium several tumors, looking like those of fungus hematodes, and all receiving a covering of sound and unbroken, but thin, pericranium. They were three in number. One was situated on the frontal bone, over the superciliary ridge, towards its outer angle: its circumference equalled that of a small orange, and its greatest projection was nearly an inch above the level of the neighbouring bone. The second tumor was seated over the left parietal bone, at the top of the head, and not so large as a half-crown piece. The third was nearly, if not quite, the size of the first, placed far back in the occipital region, to the right of the median line.

The calvarium was removed with the dura mater attached to it. The membrane, looking from within, was found to be free from ulceration at the site of the tumors, but under each it presented an injected and inflamed appearance, more or less determinate. The dura mater was stripped from the bone, when it was found to be attached to the root of each tumor by adhesions, which, however, were readily torn through.

The tumors themselves were of the genuine medullary character. They were in contact with the pericranium externally, with the dura mater internally, and the intermediate bone was more or less absorbed, and blended in spiculæ with the diseased mass. The degeneration had demonstrably commenced in the diploë, for the destruction of this was much more extensive than that of either of the outer tables: indeed, the medullary matter was in some parts contained in the diploë, whilst the outer and inner tables yet remained entire. The tumor at the corner of the eye had made its way through into the orbit, and had not pierced the periosteum of that cavity. Nothing unusual was observed about the brain, or its more immediate investing membranes.

Thorax.—There was no effusion into the cavity of the pleuræ, nor other marks of inflammation of the membrane. The lungs presented in one or two parts small medullary deposits.

Abdomen.—The liver presented an exquisite specimen of the disease. Medullary tumors, of various sizes, were found in its substance, and towards the under part of the left lobe was a very large one. In those which were most mature, a kind of ulcerated cavity was contained in the centre. In all, the outer portion constituted a sort of cortical substance, finer grained and more compact than the central, which was coarse and rough. In each of the kidneys were several cysts, containing a drachm or more of greenish fluid, with membranous septa running across them. They were chiefly in the tubular substance of the viscus. In several parts of the cortical substance were pale, fibrous-looking patches, not tumors, resembling what are frequently met with in the organ. There was much thickening about the cervix uteri, and the section showed a surface really not unlike commencing medullary fungus.

In the situation of the left mamma was a tumor the size of a walnut, of medullary structure; and towards the axilla were one or two more, apparently lymphatic glands, disorganized in this way. The right mamma, which was shrunk and withered, had not, when cut into, a natural appearance.

Over the left patella was a diseased bursa. It was a perfect cyst, and readily dissected from the subjacent ligament and bone. Its walls were quite cartilaginous, and three or four lines in thickness. Its cavity contained a yellowish lacerable substance, half lymph, half pus.

So much for the dissection, which we have given first, on account of its very interesting character; and we shall now proceed to relate briefly the history of the case.

The patient was first admitted into the hospital on the 24th of December, 1828, with a malignant-looking, ulcerated tumor of the left breast, of seven months' duration, and originating, it would seem, in suppression of the milk. It had first ulcerated three weeks prior to admission, and hemorrhage had occurred more than once during that short period. The fungus being in a foul and very sloughy state, and resembling carbuncle in no slight degree, Mr. KEATE made a crucial incision into its substance. The bleeding which ensued was arrested by pressure with lint and a roller; but hemorrhage took place every now and then, the surface became no cleaner, and on the 1st of January the whole of the breast was removed by amputation. An enlarged gland in the axilla, which the patient stated to have been there before the disease in the breast commenced, we rather think was left. The section of the amputated tumor of the breast showed it to consist of the medullary sarcoma, run into ulceration on its surface.

The operation was followed by no very urgent or alarming symptoms, though nothing like healthy union or a speedy convalescence ensued. She continued to be harassed from time to time by attacks of vomiting, with much irritation and depression of the system; and on the 6th the parts around the wound were invaded by erysipelas. This attack was not severe, and

speedily gave way to the bark and supporting system. On the 16th, a large abscess was discovered to be forming in the right nates; and on the 26th it was opened, and a considerable quantity of pus discharged. By the 7th of February, the wound on the chest was nearly healed; and she was made an outpatient on the 18th, at her own particular request.

Previously to this she had complained of pain about the shoulders, and thickening and induration were but too apparent at the axillary margin of the pectoral muscle on the amputated side. Need we say that the prognosis was gloomy in the extreme.

On the 1st of April she re-applied for admission, in a melancholy condition. In the interval between the date of her leaving the house and that of her re-entering it, tumors, apparently malignant, had formed upon three different parts of the head. She complained of constant pain in that region, and the right side of the face was partially paralysed. In the axilla, or its margins, several indurated tumors were felt, and one or two in the cicatrix of the former wound.

It would be useless to particularize the treatment had recourse to, as not the slightest benefit ensued from its employment. She gradually sank into an apathetic state, with the mouth distorted, and more or less paralysis of many other parts. The tumors grew, but did not ulcerate; and in this miserable condition death at length put a period to her deplorable existence.

The rapid progress of the tumors on the head is a very remarkable circumstance, and, taken in connexion with the presence of the disease in the lungs and liver, serves to place in, unhappily, too broad a light the constitutional seat of medullary sarcoma. The case will also serve to show how small the chance of success from amputation is, when performed after the tumor has gone into ulceration.*

HOTEL DIEU.

Syphilis. Paralysis of the Facial Nerve. Cure. (HÔTEL DIEU, Saint-Jean's Ward, No. 12.)

A GIRL, æt. sixteen, of a healthy constitution, contracted gonorrhœa in November 1828, for which no treatment was adopted. Six weeks after, she arrived in Paris: at this time there was a tumor upon the left frontal protuberance. The day after her arrival, during the night, without any previous pain or any accidental cause, she experienced a numbness of the left cheek; the whole of the face on this side was stiff and insensible, and in the morning she perceived that her mouth was strongly drawn towards the right side. There was also a slight stiffness of the tongue, and her speech was embarrassed. No other symptom existed. Upon the first attack, she had been bled twice in the day from the

* Medical Gazette.

arm, and on the succeeding day leeches were applied to the anus. From this treatment no benefit was obtained, and two days after the patient was admitted into the Hôtel Dieu.

The gonorrhœal discharge still existed, and the exostosis of the os frontis was very apparent. Neither the head nor stomach was affected. The motions of the tongue were free and natural; the difficulty of speaking evidently resulted from the immobility of the cheek and lips. An emetic was given on the two succeeding days, and on the third she was bled from the arm, but no alteration occurred. The antisypilitic treatment of M. DUPUYTREN was now commenced, consisting of pills of an eighth of a grain of the deuto-chlorate of mercury, half a grain of opium, and two grains of extract of guaiacum. Three of these pills were taken each day, together with decoction of sarsaparilla and sudorific syrup.

Eight days after the appearance of the paralytic affection on the left side, the same symptom suddenly manifested itself on the right, and the face of the patient, when she awoke, was no longer drawn to one side. There was now a complete relaxation and a perfect immobility of all the features. The eyelids could be only half closed, and the tears flowed over the cheeks. The lips remained open, and were agitated like two curtains by the expired air. The tongue was not affected. The power of motion had alone suffered, for the skin and the mucous membranes retained their natural sensibility. The patient did not suffer, and her naturally very expressive countenance had now a serious cast, which oddly contrasted with her cheerful disposition of mind. She sometimes laughed heartily, but she appeared as if she were laughing behind a mask, and, from a knowledge of this fact, she was much annoyed.

The treatment was regularly continued, and a blister was applied on the left cheek near the ear, and several others successively on the same part of the right side of the face. A large seton was placed in the neck, which produced considerable pain; suppuration was not established from it for a month, until when its benefit was not apparent.

At the expiration of two months, the mobility of the cheeks was gradually recovered. The patient no longer slept with her mouth open. The power of closing the eyelids was by degrees restored, and the tears no longer flowed over the cheeks. It is to be observed, that none of the senses had ever been affected. Both taste and smell had remained perfect; neither had the sensibility of the skin been diminished or altered. The general health had not been disturbed; the appetite was good throughout the attack. At the commencement of the disease, however, the patient disliked to eat, because the food, on account of the immobility of the cheeks, collected in the mouth, and she had not the power of forming it into a mass, or of swallowing it. She latterly became accustomed to this state, and her tongue, fingers, and various instruments, were made to perform the duty of the buccinator and labial mus-

cles. The muscles of the face very gradually regained the power of assisting in respiration, or of depicting any mental emotion. The patient had been observed to sneeze without presenting that peculiar expression of the face which naturally accompanies the act. When she gaped, the jaw dropped, but neither the lips nor the countenance indicated, in the slightest degree, the sensation which is connected with gaping. There can be no doubt that, if dyspnœa had arisen from any cause, the nostrils would have remained motionless, instead of assisting in that painful expression which is so often evident in asthmatic subjects.

After remaining four months in the hospital, the patient went out in the following state: The exostosis on the frontal bone had disappeared, the gonorrhœal discharge had ceased, and the general health was good. Her round and cheerful face expressed with vivacity every moral and physical sensation. Her laugh was still rather cold, for the motions of the lips did not appear to correspond with the rapidity or extent of the motions of the diaphragm and ribs. She masticated easily, and had the power of collecting her food into a mass for deglutition. With a slight effort she could completely close the eyelids, but the tears frequently flowed over the cheeks. The seton was kept in, and there was every reason to believe that in a few months the patient would retain only the remembrance of this singular affection.

If the experiments of CHARLES BELL upon the functions of the encephalic nerves required any confirmation from clinical observation, this case would be better calculated than any other to prove the correctness of his views respecting the use of the facial nerve. In this instance, all those phenomena occurred which result in animals from the division of that nerve at its exit from the styloid foramen. It is probable that in this patient a slight exostosis had compressed the nerves, as they passed out of the cranium. The efficacy of the antisyphilitic treatment is by no means certain. It is probable that the topical irritants performed the cure, and they were indispensable; for, very frequently after the removal of the cause which originally produced paralysis, this symptom still requires to be combated by local stimulants.

One part of the detail of this very curious case appears contradictory. At the commencement it is stated that the face was "*raide et insensible*," while further on we are told that the power of motion only was affected, and that "*la sensibilité de la peau n'a éprouvé aucun changement*." We presume that the term "*insensible*," as first employed, was meant to describe an inanimate expression of the countenance, and not that the face was deprived of its physical sensation.—EDITORS.

PHILADELPHIA ALMSHOUSE INFIRMARY.

Case of Fever, with Death from Mercurial Irritation. By
Dr. SAMUEL JACKSON.

T. KELLY, aged twenty-two years, entered the clinical ward, September 26th, 1818; his habits of life regular; a weaver by trade. He had been ill seven weeks with fever, which in the commencement had been pronounced, by his attending physician, bilious fever.

The symptoms on admission were, emaciation; cough troublesome at night; sense of stricture in chest; soreness of epigastrium, with tenderness and pain on slight pressure; hiccup; skin warm, dry, and sallow; pulse frequent, some fulness; sordes on teeth; tongue clean, dry and polished; eyes sallow; carotids pulsate with force; perfectly sensible; great soreness of his flesh; no appetite, and not troubled with thirst; diarrhœa, bowels moved six times before admission today, and almost constantly since; discharge watery and offensive. He appeared much prostrated and exhausted by his removal to the Infirmary.

He stated that during his illness he had been vomited several times, had been very frequently purged, and had been taking powders of calomel.

Directions were given to sponge his body with tepid whiskey, to have cold applications maintained to his head, with small quantities of weak wine whey until he should recover from the effects of his fatigue, and chicken-water for diet. Sulph. Quinæ gr. i. in mucilag Gum Arab. was directed every three hours; and injections of Laudanum gtt. xx. with flaxseed mucilage, to check the diarrhœa.

In the evening, improved; skin moist, and of natural heat; pulse seventy-six; tongue moistened. Omitted sponging and cold to head. Chest relieved.

27th.—Skin of natural warmth and moisture; tongue slightly furred, tumid, not florid, but disposed to become dry; pulse ninety-six, soft; abdomen tumid; right hypochondrium soft, but painful when pressed; left is occupied by a large hard tumor, extending to the umbilicus, but does not possess much sensibility; epistaxis; sordes on teeth. Vomited in afternoon. Lime-water, with arrow-root and gum-water for diet. Bowels too open.

28th.—Skin warm; tongue dry, nearly clean; pulse 100 and irritated; nausea. Omit Sulph. Quinæ; pediluvium, and sponge the body as before.

Evening.—Febrile irritation declined; disorder of bowels checked.

29th.—Slept well. Skin moist, cool, and comfortable; no fever; pulse seventy-two, soft; tongue with adhesive mucus on it; slight hiccup and occasional retching; eyes jaundiced; abdomen covered with numerous purple spots. Beef-tea for diet, alternated with oyster-liquor.

30th.—No pain; tongue same; skin warmer; pulse more irritated; bowels disposed to be too loose. Tepid sponging, and injection of flaxseed mucilage and laudanum.

October 1st.—No fever; appears to be much improved.

2d.—Pulse more irritated; tongue become drier and florid; sordes collecting on teeth; diarrhœa; abdomen tympanitic or meteorized. Stimulant frictions to the skin, and lower extremities to be enveloped in blankets wrung out of warm water; injections of flaxseed and laudanum; fomentations to abdomen.

3d.—Pulse excited; skin warm; tongue florid; parotid glands swelled and painful. Poultice, moistened with lead-water, to parotids.

4th.—Swelling extends over the whole jaws and face; skin stretched and shining. Mouth cannot be opened to admit of an examination. Skin hot; feet cold. Milk and oyster-soup for diet.

5th.—Swelling increasing. Directed leeches to parotids. Breath offensive, mercurialized. The mercurial action has developed violent inflammation of all the salivary glands and mucous membrane of mouth, and which has extended to the adjacent tissues. No secretion of saliva from excess of irritative action.

6th.—Swelling extends down the neck on each side to near the clavicle; skin very tense, but not discoloured, and the swelling is very tense, as if the fascia was put on the stretch; pressure is exceedingly painful. No fever.

7th.—Nearly in same state; cooling lotions applied to swelling; sleeps well. Soft egg added to diet.

8th.—Suppuration of tumor in the parotids advancing. Poultice.

9th.—Tumor opened, discharged large quantity of healthy pus. Relieved of pain.

10th and 11th.—Discharge of pus very copious.

12th.—Had chill; diarrhœa came on; pulse very feeble.—
 Carb. Ammon. julep 3ss. every hour; oyster-soup; beef-tea.

13th.—Slept well; discharge from abscess very profuse; pulse extremely feeble; strength failing. Diffusible stimulants exhibited ineffectually, and he died in the evening.

Case reported by Dr. ASHMEAD.

The body was removed by the friends of the deceased, who would not permit an autopsy to be performed.

Remarks.—This case, when first admitted, presented the characters attending on the inflammations of the mucous tissue of the digestive canal, assuming a chronic state, and which so frequently are the concluding act of bilious and remitting, and sometimes of intermittent fevers, treated improperly by emetics, active cathartics, and other irritating remedies, addressed to a tissue already morbidly irritated.

When fevers have passed to this state, they generally are christened typhus; and, when the meningeal membranes or the brain partake of the same condition, this designation is pronounced

without hesitation; and, if violent stimulation be the treatment adopted, typhus gravior, in its most characteristic shape, soon grows up under the hand of the practitioner.

On admission into the ward, the case seemed too desperate to permit an expectation of recovery to be entertained. An improvement did take place, and a fair prospect of restoration appeared to be opening, when an increase of irritation ensued, for which no cause could be at first assigned; swelling of the parotids and jaws soon followed, the origin of which, although not at first suspected, evidently arose from the action of the mercury, which had been administered previous to his entrance into the house, and had been taken during his protracted illness. No circumstance could have been more untoward than this accident. The recuperative powers of the economy were exhausted by the severe disease that had preceded, and were at best merely capable of rescuing him from the chronic inflammations that had been permitted to become established in the digestive mucous tissue; and which event was even a problematical occurrence. The development of the mercurial irritation in this state, and to the extent it assumed, was a reinforcement in favor of the disease, and to the detriment of the patient, that gave a decided turn to the contest against him.

This result of the attempt to cure fevers by the establishment of a salivation, or to place the economy under the comprehensive domination of the mercurial irritation, is, I have strong grounds to believe, a circumstance far more common than is suspected, or than many will be disposed to acknowledge.

This fashionable practice I have abandoned since the epidemic of 1822, the commencement of the series of epidemic intermittent, remittent, and bilious fevers, that continue still to prevail over so large a portion of the country. I was compelled to renounce it from witnessing, in so many instances, the injurious results of the treatment to the patient. The mercurial action in violent cases, I found, could very rarely be brought on before the intensity of the local inflammations and the sympathetic fever were on the decline; and then the inflammations awakened by the mercurial irritation were not to be desired: they were nearly as much to be dreaded as those which constituted the disease. In many cases, after convalescence had commenced, the mercurial action came on, and I had the mortification to be perfectly convinced, though no suspicion crossed the mind of the patient, that a rapid recovery had been prevented, and protracted suffering been endured, in consequence of the employment of the remedy, though done under the sanction of high authority at home and "great names abroad."

The mercurial irritation, it is to be kept in mind, when it is developed as febrile disturbances in the system are subsiding, does not, in numerous instances, induce a salivation; nor is this effect a necessary consequence of the administration of the mer-

curial preparations. On the contrary, they often excite, at that time, from the numerous irritations still existing, an extent of action in the mucous tissue of the digestive canal and the mouth, and which is thence extended into the glands connected with them, transcending the degree in the range of which secretion is possible. The consequence is inflammation, ulceration, hemorrhages, together with re-excitement of febrile commotion. The new train of symptoms are then frequently set down for a relapse; and, if the mercurial treatment be instituted, the patient almost assuredly perishes.

Another effect of the mercurial irritation suddenly displayed in a system exhausted by an attack of fever, is prostration of the powers of the nervous system and of the heart, with a rapid collapse terminating speedily in death. The patient, in these instances, appears to be entering into convalescence; the fever has ceased from two days to six or seven; the appetite is improving; the skin is moist, but has a flabby feeling; head unembarrassed; bowels regular. In the midst of these favorable appearances, while all apprehensions are allayed, and a restoration is regarded as beyond a doubt, the patient, in all the cases that have come to my knowledge, is seized in the night with nervous tremors, cold sweats, great anxiety, rapid sinking of the forces, and, after a short agony, (often before the physician, who has been summoned on the invasion of the danger, can reach his patient,) the mortal scene has closed. The cases in which the circumstances I have mentioned occurred, were those in which the system had been freely charged with mercury during the febrile period, but no affection of the gums had taken place.*

Dr. Jackson also relates a case of bilious fever, with death from mercurial irritation. In this instance the patient continued to improve until the mercurial action had commenced. "From that time the case assumed a new aspect: inflammation of the gums and parietes of the mouth, and of the salivary glands came on; hemorrhage from the mucous membrane of the mouth, fever, incapacity of swallowing, and death; which could not be attributed to any other cause than the mercurial irritation and fever that had been established."

* American Journal of Medical Sciences.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
illa, prius, cretâ; mox hæc, carbone, *notamus*.—*PERRAUS*.

Pathological and Practical Researches on Diseases of the Stomach, the Intestinal Canal, the Liver, and other Viscera of the Abdomen. By JOHN ABERCROMBIE, M.D. Fellow of the Royal College of Physicians of Edinburgh, &c. and first Physician to his Majesty in Scotland.—8vo. pp. 396. Waugh and Innes, Edinburgh, 1829.

THE ability with which Dr. ABERCROMBIE has conducted his pathological investigations, gives him a place amongst the most useful writers of the present day. Two very desirable, yet not perhaps very common, features characterize his previous labours. He has shown himself to be free from the shackles of any exclusive system of pathology, and he allows diseases to retain their real characters, even should they be opposed to the abstract and artificial arrangements of nosology. Above all, he has been careful to form no general conclusions upon imperfect evidence; the besetting sin of so many medical writers. Although he has drawn very freely from various sources, in order more freely to illustrate the practical points he has discussed, we have not found him under the sway of that indiscriminate and injudicious passion for quotation which too often fills a volume, but adds nothing to the improvement of the reader of it. His practical experience ensures us judgment in his selections from the works of others.

As we have formed a favorable opinion of the previous investigations of Dr. Abercrombie, we naturally approach the present volume with the belief that we shall find in it much practical matter, that will deserve the studious consideration of medical practitioners. In all his researches, the object of Dr. A. has been to furnish facts in a concise and accessible form, and to advance to conclusions by the first step of the most cautious induction.

The volume before us is divided into five parts, in reference to the five organs to which it relates, namely, the stomach, the intestinal canal, the liver, the spleen, and the pancreas. The two former are treated of at some length, with a view both to pathology and practice; and the three latter are considered with a more immediate reference to their pathological changes. The author first takes a general view of the various structures which enter into the

formation of the stomach and intestinal canal, and of the principal morbid conditions to which they are subject. The peritoneum is liable to acute and chronic inflammation, and to various remarkable changes of structure, some of which result from inflammation, while others seem to have a different origin. The first effect of a certain low degree of inflammatory action upon serous membranes appears to be simply an increased deposition of the serous fluid; and in this manner it is probable that a certain state of these membranes, which, if not actually inflammatory, closely borders upon it, is sometimes relieved; the increased quantity of fluid being afterwards absorbed, and the parts thus recovering their healthy relations. In different states of the disease, remarkable varieties occur in the characters of the fluid which is deposited. In one case it is opaque and milky, or it contains shreds of flocculent matter, or it has all the sensible properties of pus. All these varieties of the effused fluid are sometimes found without any remarkable change in the membrane itself, but in general it has undergone some considerable deviation from the healthy structure. The first is a slightly softened and thickened state of the membrane, giving it somewhat the appearance of a part which has been boiled. This Dr. A. thinks is commonly connected with the opaque milky deposition. The more common appearance consists in the surface being covered by a coating of false membrane. This may be connected with the milky flocculent fluid, or with fluid which has all the sensible qualities of pus, or with an entirely limpid fluid.

"In the latter case, the deposition on the surface of the membrane will prevent the re-absorption of the fluid, so that the accumulation, which might otherwise have disappeared, will thus become a permanent dropsy of the cavity, provided the disease has not existed in such a form as to be speedily fatal. This state of parts is often seen most remarkably in the cavity of the pleura, the cavity being full of a limpid fluid, while it is lined by a complete and uniform cyst of false membrane. We are entirely unacquainted with the causes which regulate these varieties in the deposition from inflamed serous membranes. Under the influence of inflammation, also, whether acute or chronic, serous membranes are liable to form adhesions betwixt their opposite surfaces; and this may consist of simple adhesion with very little appearance of any interposed substance, or there may be an interposition of false membrane, which is often of very considerable thickness." (P. 4.)

In their structure serous membranes are liable chiefly to

three morbid conditions: first, simple thickening, which is seen most strikingly in the peritoneum, which is sometimes found thickened in a most remarkable degree, and it appears to be the result of inflammation which has gone on in a chronic form. 2. Tubercular disease; the whole surface of the membrane being found studded with innumerable tubercles, generally of a small size and of a firm consistence. We saw a good example of this form of disease many years ago. The patient had not complained of any symptoms which indicated any affection of the peritoneum, but, upon dissection, the whole surface of the membrane was found thickly studded with small opaque bodies, which at first sight presented very much the appearance of small-pox pustules. Around the basis of these morbid growths there was no appearance of inflammation, nor was there any effusion into the cavity of the peritoneum. 3. There is another affection, often met with in the peritoneum, which appears distinct from tubercular disease. The membrane is covered by nodules of various shapes and sizes, of a semi-pellucid character and smooth rounded surface. The masses of this substance are sometimes of great size, and a large extent of the peritoneum may be found covered by them. This is the disease described by Dr. BARON, and supposed by him to be of the nature of hydatids. Dr. Abercrombie states that, although, on a first inspection, it has a resemblance to hydatids, in the specimens which he has had an opportunity of examining it appeared to be entirely of a different nature. "The nodules were of a uniform firm gelatinous consistence, or sometimes more dense at the centre than at the circumference. They did not appear to be covered by any cyst, and they were entirely soluble in boiling water."

The second structure is the muscular coat. We know little of the diseases of the muscular fibre, except in as far as relates to derangement of its functions. In a muscular covering which invests a cavity, the principal deviations from the healthy state appear to be the following: 1. A morbidly increased, but uniform and harmonious action; 2, a morbidly increased, but partial and irregular action; 3, diminution or loss of muscular power; 4, thickening of the muscular coat has also been described by some of the French writers, particularly as occurring in the stomach, constituting what they term hypertrophia, though some of them appear to apply this term to a general thickening of all the coats.

"Inflammation seems also to destroy the action of muscular

fibre. Thus, intestine which has been highly inflamed is generally found in a state of great distention, showing the complete loss of its healthy muscular action; and, if the disease has gone on until the intestine has either become ruptured or has given way by ulceration, it is found to have fallen together like an empty bag, without any appearance of muscular contraction; whereas healthy intestine, when it is empty, contracts uniformly into a round cord. In regard to the immediate effects of inflammation upon muscular fibre, there is considerable obscurity; but one point may be considered as known and established, which is of considerable importance for our future inquiries, namely, that a result of inflammation in muscular fibre is gangrene. When, therefore, we find gangrene in the intestinal canal, we have reason in general to conclude that inflammation has existed in the muscular coat: for we shall afterwards find grounds for believing that it may exist in each of the coats separately without affecting the others, but giving rise to most important diversities in the symptoms." (P. 6.)

The third structure to which the researches of the author refer is the mucous membrane. The structure and functions of this membrane are briefly described. We have to attend to various forms of disease in mucous membranes connected with their peculiarities of structure. 1st. Inflammation and its consequences. From the lowest degree of inflammation on a mucous membrane appears to arise simply an increase of its proper secretion, more or less changed in its qualities from the healthy condition. In another state of inflammation we have aphthous crusts, and in a third the deposition of false membrane. "This last we see most remarkably in the bronchial membrane; it is also met with, though more rarely, in the mucous membrane of the intestines." We have at this moment a woman under our care, labouring under the disease denominated by MASON GOOD "diarrhœa tubularis." This patient has for some weeks discharged membrane-like tubes and flakes, which had been thought to be part of the mucous membrane of the intestines. The substance discharged in this case is considerable in quantity, and somewhat resembles the fibrous exudation thrown forth from the trachea in croup. In some instances this secretion has assumed the exact shape of the intestine.

In a more advanced stage, the mucous intestinal membrane may be softened from inflammation, or an ash-coloured pulpy degeneration of portions of the membrane may occur, which fall out and leave spaces, and perhaps pass into ulceration. A considerable extent of the membrane is occasionally found in a state of uniform dark softening, resembling gangrene. Adhesion of the opposite surfaces

of the mucous membrane is sometimes met with, producing complete obliteration of the canal; but this Dr. A. states is very rare. The mucous membrane is apt to become thickened from long-continued chronic inflammation. In this manner is formed stricture of the urethra, and a similar diminution of the area of the intestinal canal.

Diseases of the follicles, or simple glands of the membrane, is a subject involved in much obscurity, but it seems to promise some interesting results. "The follicles appear to be liable to a vesicular or pustular disease, which passes into small, defined, distinct ulcers, quite unconnected with any disease of the mucous surface. Disease of a tubercular character is often met with on the mucous membranes, and in the cardia, pylorus, and extremity of the rectum: it often assumes a scirrhus character.

Having given a general sketch of the various morbid conditions to be considered in regard to the intestinal canal, the author enters upon the "*Pathology of the Stomach.*"

The great proportion of affections of this important organ appear to be entirely of a functional nature, leaving no morbid appearance that can be discovered after death. In others the appearances are too doubtful to lead to any precise principle in pathology. "In a practical point of view, also, this is perhaps more encumbered with uncertainty than almost any other department of medical practice; for the diseases are so much under the influence of moral and other adventitious causes, that the action of remedies is aided, modified, or counteracted, in a manner which entirely eludes our observation, and is often altogether beyond our control." Dr. Abercrombie considers affections of the stomach under three classes:

"1. Affections of an inflammatory kind, including ulceration and its consequences.

"2. Affections which more properly come under the class of organic.

"3. Functional affections, embracing a slight outline of the subject of dyspepsia.

Of the inflammatory affections of the stomach, and ulceration.—The author observes, that although acute gastritis is described by all systematic writers, it is very difficult, in the records of pathology, to find a pure example of it in an idiopathic form. He has often been astonished to find how seldom the stomach shows marks of inflammation, even when the organs most nearly connected with it have been inflamed in the highest degree. A case of pure inflammation of the peritoneal coat of the stomach Dr. A. has never

seen; neither does he find it described by any writer. The disease which we call gastritis is to be considered as seated chiefly or entirely in the mucous membrane, and even here it is very rare as an acute and idiopathic disease. The symptoms which are usually described as those of gastritis, are pain and tenderness in the region of the stomach, urgent vomiting and fever; but, from the facts upon which we can rely, it does not appear that the symptoms are so uniform as systematic writers would lead us to believe. On the other hand, DE HAEN, STOHL, and FRANK, describe cases of what they term inflammation and gangrene of the stomach, in which none of the usual symptoms of gastritis had occurred; and other cases which had exhibited all the symptoms of gastritis, while no appearance of inflammation could be discovered on dissection. It is also very certain that symptoms closely resembling those ascribed to gastritis frequently subside under treatment the very reverse of that which would have been applicable to inflammation.

"To these circumstances we have to add the important facts ascertained by Dr. Yelloly and others. In numerous cases of persons who died of other diseases, without any symptoms in the stomach, and in the bodies of criminals who had been executed, they have pointed out appearances which might have been considered as distinctly indicating inflammation of the mucous membrane of the stomach." (P. 15.)

Dr. A. presumes it will now be admitted that the term inflammation ought not to be applied to any appearances consisting of mere change of colour or increased vascularity, without some decided change in the structure of the part, or some of the actual results of inflammation.

"Upon the whole view of the subject, the conclusion seems to be, that we are still very much in the dark in regard to idiopathic acute gastritis. For my own part, I have never seen a case which I would consider as being of this nature; and I am disposed to regard as points not yet ascertained, what are the characters exhibited by the mucous membrane of the stomach in the earlier periods of acute gastritis, and in what they differ from appearances which may exist without any symptoms of gastric disease, or take place after death. If we might proceed in any degree upon the analogy of the corresponding affection in the mucous membrane of the bowels, I should be inclined to suppose that the disease exists under two forms: that in the one it is seated chiefly in the follicles or simple glands, in the other in the mucous membrane itself; that, in the former case, it would consist, in its early stage, of detached and minute pustules or vesicles, and would terminate at an early period in minute and detached ulcers; and that, in the other, it would exhibit, in its first stage, the appear-

ance of defined portions of the mucous membrane, of a red or livid brown colour, and sensibly elevated above the level of the surrounding parts; these portions afterwards terminating by softening or ulceration, or passing into a chronic state of disease with ulceration, thickening, or fungoid elevations upon the diseased parts. This is in some measure conjectural; but I think we may safely assert that, in this investigation, nothing can be founded upon a mere general or extensive redness of the membrane, discoloration, or increased vascularity, whether more or less extensive, venous turgescence, extravasation of blood into the cellular texture, or upon any appearance which consists of mere change of colour, without any decided change in the structure of the part." (P. 15.)

Leaving this part of the subject for further investigation, the author proceeds to another of much practical importance, in reference to which we have many interesting facts on which we can proceed with confidence. We have every reason to believe that the mucous membrane of the stomach is liable to inflammation in a chronic form, which often advances so slowly and insidiously that its dangerous nature may be overlooked, until it has passed into ulceration, or has even assumed the characters of organic and hopeless disease.

"Further, we shall find that even ulceration may exist in the stomach without producing any symptoms of an alarming nature, until it gives rise to an attack which is very speedily fatal. In the early stages of this affection, the prominent symptoms are often such as merely indicate derangement of the functions of the stomach, and are apt to be included under the general term dyspepsia. The patient perhaps complains of extreme acidity, eructations, flatulence, and oppression of the stomach after eating. There is generally some degree of pain in the region of the stomach, but it varies very much both in its degree and its duration. In many cases it is complained of only after eating, continues in considerable severity while the process of digestion is going on, and subsides when that process is completed. The appetite is often unimpaired, but the patient is afraid of taking food on account of the uneasiness which is produced by it, and he is entirely free from complaint when the stomach is empty." (P. 17.)

Vomiting is apt to occur, but in the early stages is only occasional, and is ascribed to some error in diet, or other accidental cause. Afterwards it becomes more frequent, but still without that regularity which would seem to indicate serious disease. By attention to diet it may be in a great measure prevented, and in this manner the disease may go on for months without exciting alarm. The vomiting then, perhaps, becomes more frequent, and the

uneasiness in the stomach more permanent, until the patient either sinks by gradual wasting, or is suddenly cut off by one of those rapid attacks which Dr. A. afterwards particularly describes. In all the forms of this insidious disease there is great diversity in the symptoms. In many cases it will be found that little or no uneasiness had ever been complained of until the attack takes place, which is fatal in a few hours. "An important circumstance, therefore, in the history of this affection is, that it may run its course almost to the last period without vomiting, and with scarcely any symptom except the uneasiness which is produced by eating, and which subsides entirely in a few hours after a meal." The author gives a case in illustration of this fact. In some cases the prominent symptom is a very copious discharge from the stomach of a clear glairy fluid, like the white of eggs. In a woman, mentioned by Andral, this discharge amounted to about four pints in twenty-four hours, and she never vomited either food or drink. This discharge is sometimes streaked with a black matter, or is entirely of the colour of chocolate, and not unfrequently is mixed with grumous blood.

From this chronic inflammation of the mucous membrane results very frequently ulceration, in various forms, of the inner surface of the stomach. There may be one or more small defined ulcers of limited extent, with evident loss of substance and rounded and elevated edges, every other part of the stomach being in the most healthy state. The ulcer may be confined entirely to the mucous membrane, or all the membranes may be perforated. An interesting case of this latter form of disease is given in our Journal for April 1825, p. 289, by Mr. GRIFFITHS. In this instance the perforation of the stomach is described as "looking much as if it had been made with a punch." Precisely the same description is also given of similar cases related by Dr. EBERMAIER,* who remarks that the real nature of the malady was in no instance suspected by the physicians. Death sometimes occurred unexpectedly, almost in the midst of apparent health. Dr. E. is of opinion that these perforations do not result from ordinary chronic inflammation. Similar ulcerations, perhaps the size of a shilling, but complicated with thickening and induration of the parietes of the stomach around the ulcer, are sometimes met

* London Med. and Phys. Journal, October 1828, p. 302, and November 1828, p. 422.—An excellent article upon this subject, which still requires elucidation, is contained in the 46th volume of the Dict. des Sc. Medicales, p. 314, art. *Perforation*, with plates.—REV.

with. In the progress and terminations of this disease there is considerable difference.

"A singular variety in the appearances is to be referred to before leaving this part of the subject. Though a complete perforation of the stomach by ulceration may have taken place, it is frequently found that an adhesion had been formed to some of the neighbouring parts, most commonly the liver, in such a manner that a portion of the surface of the liver supplies the place of the portion of the stomach that has been destroyed, and thus no escape of the contents takes place." (P. 21.)

This remarkable circumstance Dr. Abercrombie exemplifies by a case, which was afterwards fatal by a small perforation immediately adjoining the portion where this adhesion had been formed.

"Another important modification arises from adhesion of the stomach to the arch of the colon, and a communication being formed between them by ulceration." An instance of this kind is also given by the author, and several cases illustrative of the principal modifications of ulcerations of the stomach, and the insidious manner in which such diseases are apt to advance, with symptoms which are liable to be considered merely dyspeptic. The first case is especially interesting. The disease appeared to be seated entirely in the mucous follicles. One fact particularly worthy of notice was "the activity of the symptoms in the early stages, probably while the follicles were in a state of inflammation, and the obscurity of them when the disease was more advanced; likewise the proofs that many of the follicles had been in a state of ulceration, and had cicatrised; while, at the time of the patient's death, not above two or three were in a state of ulceration."

It must be evident, from the description which has been given of the uncertain and various symptoms which attend both the commencement and progress of the different species of the above-named affections of the stomach, that much difficulty must attend the diagnosis. Dr. A., from the facts he has stated, thinks there is every reason to conclude that the dangerous affection referred to in the preceding observations exists in two conditions:

"Namely, chronic inflammation of a defined portion of the mucous membrane of the stomach, or the mucous follicles; and the termination of this by ulceration. In both these conditions it may probably be the subject of medical treatment; for we have reason to believe that the inflammation may be arrested and prevented from passing into ulceration, and that the ulceration may heal before it has become connected with any permanent change

in the organization of the part. Hence appears the importance of minutely watching the progress of the disease in its early stages, in which only it is likely to be treated with success. The difficulty here is in the diagnosis; the disease often assuming the character of a mere dyspeptic affection through a great part of its progress, while in fact a morbid condition of a very serious nature is going on, which would require treatment in many respects very different from that adapted to dyspepsia." (P. 46.)

"Amid such a diversity of symptoms as occur in connexion with this disease, our chief reliance in the diagnosis must probably be on a careful examination of the region of the stomach itself, with the view of discovering the existence of tenderness referred to a particular part. This examination should be made with the most minute attention at various times, both when the stomach is full and when it is empty. If induration be discovered, the character of the case will be obvious; but we have seen that most extensive ulceration may exist without any induration, and likewise that extensive induration may exist without being discovered by external examination.

"Other important cautions in regard to the diagnosis will be learned from the cases which have been described. In particular, we should not be deceived either by the pain having remarkable remissions and the patient enjoying long intervals of perfect health, or by remarkable alleviation of the symptoms taking place under a careful regulation of diet; for these circumstances we have found occurring in a very striking manner, while the disease was making progress to its fatal termination." (P. 48.)

Treatment.—When the disease is detected at an early period, our treatment must consist chiefly of free topical bleeding, blistering, issues, or tartar-emetic ointment. Food must be small in quantity and mild in quality, as farinaceous articles and milk. The stomach should not be distended even by the mildest articles. Bodily exertion is improper, "and hence the importance of endeavouring to distinguish the disease from mere dyspepsia, as the regimen and exercise which are proper and necessary in dyspepsia would in this case be highly dangerous." In the early periods medicine can do little more than regulate the bowels. In the more advanced stages, when ulceration may be suspected, the same remark will apply to external applications and regimen.

"Benefit may now be obtained by some internal remedies, such as the oxide of bismuth, lime-water, and nitric acid; and in some cases small quantities of mercury appear to be useful. Small opiates, combined with articles of a mucilaginous nature, appear frequently to be beneficial; likewise articles of an astringent na-

ture, such as kino, alum, and the rhatany root. The arsenical solution has also been recommended, and small doses of the nitrate of silver; and, in several instances in which I suspected this disease to be going on, I have found remarkable benefit from the sulphate of iron. Whether the disease can be cured after it has advanced to ulceration, must indeed remain in some degree a matter of doubt; because, in a case which has terminated favorably, we have no means of ascertaining with certainty that ulceration had existed. In some of the cases, however, which have been described, we have seen every reason to believe that some of the ulcers had cicatrised, though the disease had afterwards gone on to a fatal termination; and, from what we observe in the intestinal canal, we can have little doubt that simple ulceration of the mucous membrane may cicatrise. I am satisfied that I have seen the cicatrices of such ulcers when the patient has died of another disease, after having been for a considerable time free from any symptom in the bowels." (P. 49.)

Under the use of strict diet, the worst cases have sometimes recovered. The following is an example:

"A female, whose age is not mentioned, had for a considerable time laboured under symptoms which were supposed to indicate scirrhus of the pylorus, and her case had been regarded as entirely hopeless. She suffered severe pain in the stomach when the smallest quantity of food was taken in, with great tenderness upon pressure and constant vomiting, which occurred regularly about the same period after eating at which it usually takes place in affections of the pylorus. A variety of treatment had been employed without benefit, when Dr. Barlow determined upon trusting entirely to regimen, by restricting her to a diet consisting wholly of fresh-made uncompressed curd, of which she was to take but a tablespoonful at a time, and to repeat it as often as she found it advisable. On this article she subsisted for several months, and recovered perfect health." (P. 51.)

Dr. A. has seen some cases of that species of aphthous affection of the mouth, fauces, and larynx, to which the French apply the name of Diphtherite. It is an epidemic chiefly affecting children, and frequently fatal. A description of the symptoms and treatment of this disease is given.

In the next section the author treats of *organic diseases of the stomach*. Under this head are briefly mentioned, induration and thickening of the coats of the stomach, diseases of the pylorus, and disease of the cardia.

Pathology of Dyspepsia.—All we know of the process of digestion is, that it is the result of the combined action of the gastric juice, and of a peculiar muscular motion of the stomach. In healthy digestion it appears that no gas is generated in the stomach, but that a certain quantity is

evolved in the farther progress of the alimentary matters through the intestines, especially in the colon; and it is said to be composed of carbonic acid, hydrogen, and azote, in various proportions.

"When these actions are in any degree deranged or deficient, the alimentary matters are not converted in the regular manner into healthy chyme; but, remaining perhaps longer in the stomach than in the healthy state of the process they would do, they undergo, in a greater or less degree, those chemical changes which would happen to them in other circumstances. Hence the generation of acidity, the evolution of gases of various kinds, and the lodgment in the stomach of matters imperfectly digested, partly fermented, perhaps partly putrid: hence, also, irregular muscular contractions, arising from the morbid stimuli thus produced, giving rise to regurgitations of matter into the œsophagus, eructations, and perhaps vomiting; or, the muscular coat yielding to the distending force of the evolved gaseous fluids, there are produced painful distention, oppression, and anxiety, or, in other words, a paroxysm of dyspepsia." (P. 68.)

Dr. Abercrombie admits that the dependence of the function of digestion upon the influence of the eighth pair of nerves, is among the most beautiful discoveries of modern physiology, but he is not aware that any practical results have hitherto been deduced from it.

In the present section the attention of the reader is directed to those cases in which derangement of the stomach is of a functional nature, or not connected with any change of structure, either of the stomach itself or of any of the neighbouring parts. It is extremely difficult to ascertain the exact nature of these functional derangements, as they are merely impaired actions of living parts. The muscular action of the stomach may be deficient, so that the alimentary matters remain in it too long, are imperfectly changed, and pass into chemical decompositions.

"We know the state of the urinary bladder, in which its muscular action is lost or very much impaired, and in consequence of which it is gradually distended, so as to hold an enormous quantity of fluid; and, when emptied by the catheter, it does not contract equally, as in the healthy state, but falls flat like an empty bag. A state analogous to this we not unfrequently see in the stomach on dissection; a state in which it appears much enlarged, and collapsed by flattening, without healthy contraction." (P. 69.)

There may be a deficiency of the corresponding and harmonious intestinal action, interfering with the second stage of digestion, and giving rise to imperfect chylification and

various morbid actions in the upper intestines. The various fluids concerned in the process of digestion may be deficient in quantity or morbid in quality. The mucous membrane of the stomach may be morbidly irritable, and the muscular coat be too easily excited to action.

“ If this occur in the stomach, the articles of food will not be allowed to remain in it a sufficient time for healthy digestion; but, after producing much uneasiness, they will either be rejected by vomiting or propelled in a half-digested state into the intestine, there to prove a source of new irritation. This is probably the state to be afterwards more particularly referred to, in which animal food produces much uneasiness in the stomach, often followed by vomiting; but in which digestion goes on in a healthy manner, on a regimen restricted to farinaceous articles and milk. If the irritability occur in the intestine, the articles may undergo their proper change in the stomach, but will be propelled too rapidly through the intestinal canal, without time being afforded for the complete process of healthy chylification; and accordingly, in many affections of the stomach and bowels, we see articles, even of the most digestible kind, pass through partially digested, or sometimes entirely unchanged.” (P. 70.)

The author has no intention of entering fully into the treatment of indigestion. The following rules he considers important.

“ 1. It appears that the muscular action of the stomach is both more vigorous and more extensive when its contents are in small quantity, than when it is much distended; and, if we suppose the fluids of the stomach to be secreted in nearly a uniform quantity, their action must also be greatly regulated by the quantity of matter which they have to act upon: hence the indispensable importance, in dyspeptic cases, of restricting the food to such a quantity as the stomach shall be found capable of digesting in a healthy manner. This is unquestionably the first and great principle in the treatment of indigestion; and, without invariable attention to it, no other means will be of the smallest avail.

“ 2. It appears that various articles of food are of various degrees of solubility in the stomach. When, therefore, digestion is apt to be easily impaired, it will be of the greatest importance not only to avoid articles which are of difficult solution, but also to avoid mixing various articles which are of different degrees of solubility. Attention to this rule will probably favor, in a great measure, the process of chymification going on in a regular and healthy manner, by avoiding a state in which the solution of one article may be more advanced than that of another. The articles of most easy solution appear to be solid animal food and white fish, both plainly dressed; vegetables are less soluble; and, among the articles of more difficult solution, appear to be fatty substances, tendinous and cartilaginous parts, concrete albumen, the epidermis

of fruits, and, according to some, mucilaginous and sweet vegetables. From some experiments of Sir Astley Cooper, it is supposed that the solubility of animal food is in the order of pork, mutton, veal, beef. Articles in small pieces are much more speedily dissolved than in larger, the action being found to begin at the circumference of the portion; and hence the importance of careful mastication.

“ 3. If digestion go on more slowly and more imperfectly than in the healthy state, another important rule will be, not to take in additional food until full time has been given for the solution of the former. If the healthy period be four or five hours, the dyspeptic should probably allow six or seven. The injurious infringement of this rule by a breakfast, a meat lunch, and a dinner, all within the space of seven or eight hours, is too obvious to require a single observation.” (P. 71.)*

Dr. Abercrombie despairs of offering much novelty of remark respecting the medical treatment of dyspeptic complaints. One caution, however, has always appeared to him of the utmost importance, and we know that it is too little attended to, however frequently it may have been enforced. It consists in regulating the bowels, which in some complaints are disposed to be inactive, by the daily use of very small doses of laxatives combined with tonics, so as, without ever purging, to imitate at all times that moderate but regular action which constitutes the most healthy state of the bowels. It must, however, be admitted that an attack of dyspepsia may arise from an overloaded state of the bowels, which may be so obstinately constipated as to demand the exhibition of powerful purgatives; but the practitioner should certainly confine himself as much as possible, in dyspeptic complaints, to the employment of mild laxatives.

The author apprehends, and very justly too, that no small injury is done by the indiscriminate use of mercury. Calomel is the catholicon of the present day, and we fear it is not more empirically employed by the public than the profession. Dr. Abercrombie is of opinion that, in all disorders of the stomach, mercury, in any form, or in any quantity, ought not to be employed when the desired effect can be accomplished by any other means. If, however, the affection of the stomach is connected with hepatic derangement, a cautious use of mercury is recommended.

* Dr. JAMES JOHNSON, in his *Essay on the Morbid Irritability of the Stomach*, has very clearly pointed out the necessity and advantage of strict attention both to the quantity as well as the quality of food taken by dyspeptic patients.—REV.

Some good practical observations are made upon the different forms of gastrodynia.

"It is difficult to say what remedies are best adapted to each of these forms of gastrodynia. I have found nothing of more general utility than the sulphate of iron, in doses of two grains, combined with one grain of aloes and five grains of aromatic powder, taken three times a day. Oxide of bismuth combined with rhubarb in the same manner, is also frequently very useful; likewise lime-water, and small opiates. When the affection proves more obstinate, it must be treated by topical bleeding and blistering, with farinaceous diet." (P. 77.)

Sympathetic affections of the heart are among the most troublesome symptoms that accompany affections of the stomach, and are always alarming to the patient, and not unfrequently a source of much perplexity and error to the practitioner.

"They appear under various forms, and frequently assume, in a very great degree, all the characters of fixed disease of the heart or large vessels. The slightest and perhaps the most common form consists of a momentary feeling of a rolling or tumbling motion of the heart, like that which is produced by a sudden surprise or fright, and it is accompanied by an intermission of the pulse. This feeling may be repeated only once or twice at a time, and occur at long intervals; or it may return in rapid succession, for half an hour or an hour together; or it may be felt occasionally, at irregular intervals, for several days or weeks, or for a still longer period. It is sometimes accompanied by a feeling as if the heart were violently grasped. In other cases, the affection assumes the form of continued fits of palpitation, or strong and irregular action of the heart, which continue without any remission for an hour or more at a time, and recur in this manner daily, or several times in a day, for a length of time; or recur at uncertain intervals. In other cases, again, these fits of palpitation continue for several days together. They are, of course, accompanied by irregularity of the pulse, when the action of the heart is itself irregular; but frequently there is no irregularity in the action, the affection merely consisting of a strong pulsation, which the patient feels or hears throbbing in his ear, and can count distinctly by the sound, especially when he lies in bed. In other cases, again, there is only an increased frequency of the action of the heart, showing itself by paroxysms of quick pulse, accompanied with a feeling of anxiety, continuing for an hour or two at a time, without any irregularity." (P. 81.)

The various forms of this affection are principally distinguished from disease of the heart by the regularity of the pulse, and the natural action of the heart during the intervals between the attacks, and also by the symptoms being

obviously connected with disorders of the stomach, and by their being relieved by treatment directed to that organ; and "particularly by the symptoms being most apt to occur while the patient is at rest, especially after meals, not being increased by bodily exercise, but rather relieved by it, and not being excited by such bodily exertion as we should naturally expect immediately to influence a disease of the heart."

Several cases are detailed, in which the function of the heart was seriously disturbed by gastric derangement.

In concluding this part of the subject, Dr. A. takes occasion to deprecate the vague and undefined use of the term "dyspepsia" which some writers have sanctioned. He observes, "when we find these writers talking of a stage of dyspepsia in which it terminates by ulceration, or various organic affections of the parts concerned, I cannot avoid considering them as using a phraseology which is at variance with the principles of sound investigation, and calculated to obscure a subject of the utmost practical importance." In this opinion we perfectly agree, although we are aware of the ability with which a different view of the subject has been advocated.

In an Appendix to the Pathology of the Stomach, some observations are made, 1st, on derangement of the stomach by tumors attached to it externally, without disease of its coats; 2d, outline of the pathology of the œsophagus; 3d, outline of the pathology of the duodenum. The following case, in illustration of the first kind of disease, is worthy of notice:

"A lady, aged about seventy, had been affected for more than thirty years with periodical vomiting, which occurred so regularly a few hours after meals, that, during the whole of this period, she had vomited a part of almost every meal. It was brought up without nausea or any unpleasant effort, and the affection had never injured her general health. I was in the habit of seeing her for several years, during which time she continued to enjoy good health, till she began to fall off rather suddenly, and died, after a short illness, with diarrhœa and rapid failure of strength.

"*Inspection.*—The only morbid appearance that could be discovered was a tumor, the size of a hazel nut or very small walnut, and resembling an enlarged gland. It lay in contact with the outside of the stomach, near the pylorus, and slightly attached to its outer coat, but without any appearance of disease in the stomach itself." (P. 90.)

A similar case is mentioned by MORGAGNI, in which the symptoms had gone on for twenty-four years: the only appearance was a slight induration of the pancreas.

We have now given a full abstract of the first division of this volume. At a future opportunity we shall present our readers with an account of the remaining subjects which the author has discussed. It would have been impossible to do justice to a work of so much practical merit in the compass of a single article.

An Account of some of the most important Diseases peculiar to Women. By ROBERT GOOCH, M.D.—8vo. pp. 432. Murray, London, 1829.

THERE was a time, half a century ago, when it was common to find, in medical men who had risen to high eminence, not only great professional acquirements, but also distinguished literary and general scientific attainments, a combination of knowledge which was not less useful to the public than it was honourable and adorning to the individual and the profession at large. This race of highly polished physicians has now nearly passed away, and given place to a class of men in general more studious of being celebrated for their practical knowledge alone, than of enriching and embellishing their minds by an acquaintance with all the polite arts and sciences. Some, however, still exist, *rari nantes in gurgite vasto*, to save the honour of their times; and of these the author, whose book is now before us, affords an eminent example. To great professional and practical acquirements, he unites an intimate knowledge of polite literature, and of the arts and sciences in general.

Dr. Gooch has long been known to the public and the profession as a physician whose opinion, particularly in female complaints, was of great value; and his method of investigating disease has generally been supposed to bear a great resemblance to that pursued by the late Dr. BAILLIE. Possessing, then, a mind so highly endowed and so rare at the present day, it is not to be wondered at that the work ushered forth under the sanction of his name should have been received with respect, and perused with interest. High as Dr. Gooch's character has hitherto deservedly stood, it will receive, we will venture to say, no tarnish from the present volume, which, whether we regard it in a literary or medical point of view, must be considered to bear the stamp of superiority. The dedication and preface, looked upon merely as specimens of composition, are written in a very elegant and classical style, and cannot fail to attract the attention of the reader; while the interior of the

volume displays a rich collection of facts and observations in reference to the diseases of which it treats, deduced from opportunities which few have enjoyed, and still fewer known how to employ.

After an instructive, although certainly rather an unusual preface, inasmuch as it is principally occupied by an address to students on the best manner of acquiring correct medical knowledge, the author proceeds to the consideration of *the peritoneal fevers of lying-in women*; diseases, on the real nature of which, some of the most distinguished cultivators of medical science have come to very opposite conclusions. This interesting subject seems to have engaged the attention of the author from the outset of his career, and has accordingly, from the long application of his talents, received much elucidation. It need hardly be stated that some writers, deservedly of great authority, have considered peritoneal or puerperal fever to be entirely of that character where bloodletting and evacuants could only be employed at the hazard of life, and where opium, wine, and other stimulants, were the only means capable of combating its alarming and rapidly fatal course; while, on the other hand, men of great celebrity have affirmed that the disease was an acute inflammation of the peritoneum, and that the proper method of treating it was by an active employment of the antiphlogistic regimen. Of the opinions of the supporters of these two very opposite doctrines, the author has given a very candid review, and has pointed out the probable grounds of the great discrepancy in their statements. The results of his own experience follow.

Not long after Dr. Gooch was appointed physician to the Westminster Lying-in Institution, he remarked that the peritoneal fever prevailed, or was epidemic, at particular seasons. The following is the description of the disease which fell under his notice at that time:

“The cases which were so numerous in these unhealthy seasons had the common symptoms and course of puerperal fever. They began a few days after delivery; the leading symptoms were diffused pain and tenderness, with some swelling of the abdomen, a quick pulse, which was generally at first full and vibrating. Sometimes it was small, but still it was hard and incompressible; The skin was hot, though not so hot as in other fevers; the tongue was white and moist; the milk was suppressed. As the disease advanced, the belly became less painful, but more swelled, and the breathing short; towards the end, the pulse was very frequent and tremulous, and the skin covered with a clammy sweat: even in this state the tongue continued moist and the mind clear, and

death took place generally about the fifth day. On opening the abdomen, which was often as large as before delivery, the intestines were found distended with air, the peritoneum was red in various parts, its surface was covered with a coat of lymph; the intestines adhered to one another, and the omentum to the intestines; coagulable lymph was deposited on various surfaces, especially in the depressions between the convolutions of the bowels and on the omentum, on both which parts it often lay in large masses. The cavity of the peritoneum contained several pints of a turbid fluid, apparently serum mixed with lymph." (P. 41.)

This complaint at the commencement bore all the marks of acute inflammation, but in the course of two or three days it had much altered its character: the abdomen became less painful and tympanitic, the strength of the patient sank in an alarming degree, the pulse varied from 140 to 160; and, when the disease had reached this stage, the patient invariably became its victim.

In the first stage of the disorder, the treatment of the author was as follows:

"I now found that, provided I saw the patient within a few hours of the attack, I could generally arrest the disease. The mode of treatment was as follows: A vein was opened in the arm, with a wide orifice, so that the blood flowed in a full stream, and it was allowed to flow till the patient felt faint; the arm was then tied up, and her head was raised so as to encourage the faintness for many minutes. As soon as the faintness had subsided, she took from ten to twenty grains of calomel in a teaspoonful of arrowroot, and afterwards half an ounce of sulphate of magnesia, dissolved in beef-tea or thin gruel, every other hour, until several copious evacuations were procured from the bowels. When the patient had thoroughly recovered from her faintness, from ten to twenty leeches were applied to the painful and tender parts of the abdomen; when the leeches had fallen off, a bag, long and broad enough to cover the whole abdomen, was stuffed with hot poultice, which was spread so as to form a cushion nearly an inch thick: this was laid hot over the whole abdomen, and renewed so often as to keep up heat and moisture." (P. 46.)

Bleeding was afterwards repeated as long as the pulse remained firm and the abdomen painful; or local blood-letting, by means of leeches, according to the severity of the symptoms, was employed. "The active treatment," says Dr. Gooch, "that which will determine the fate of the patient, should be begun and ended during the first day: when employed later, it is under great disadvantages, and with many diminished chances of success."

The conclusion to which Dr. G. came as to the nature

of the puerperal fever which prevailed occasionally between the years 1812 and 1820, was that it was "a fever attended by acute inflammation of the peritoneum; that the inflammatory stage was often very short, soon terminating in great and irremediable effusion into the peritoneum; that the disease was curable only in the inflammatory stage by active bleeding and purging; and that, although it was impossible to draw the line, and say when the inflammatory stage terminated in that of effusion, because it differed in length in different cases, yet that it was often incredibly short, and that the treatment had not a fair chance of success unless begun during the early hours of the disease. Thus my experience agreed in all the principal points with that which had been so forcibly stated to the public by Dr. Armstrong and Mr. Hey." (P. 62.)

The author soon, however, found that if a woman, after lying-in, had pain and tenderness of the abdomen, with a rapid pulse, it was *not* necessarily a case of peritoneal fever, for which the only remedy was early and active depletion, and that there were cases of lying-in women affected with pain and tenderness of the abdomen, which it is impossible to distinguish from the symptoms of real inflammation; with rapid pulse, and all the usual symptoms of peritoneal fever, which were not cases of that disease. They were rendered worse by an early and active depletion; nor, on dissection, did the body exhibit any marks of peritoneal inflammation. The author has related several cases of this disease, with all the symptoms of puerperal fever, which during one epidemic was generally fatal, and where no morbid appearance of the peritoneum could be discovered after death. The disease was relieved, and frequently cured, by means of opiates, and remedies of a similar nature. The author concludes this part of the subject by stating, "the experience of the last few years has brought me to this conclusion: that the sanguine hopes which were entertained a few years ago, that the peritoneal fevers of lying-in women are always of an acute inflammatory type, and are always to be cured by early bleeding and purging, as they were not borne out by the reasoning employed, so they have not been confirmed by subsequent experience." (P. 97.)

Such is precisely the result of our own observation, and we confess we are yet unable to distinguish with certainty those cases which may, from the commencement, be trusted to the *free* exhibition of opiates, from those which demand active and repeated bloodletting. In one case the perti-

nacious opposition of a patient afforded us a useful lesson. It was determined in consultation that she had peritoneal inflammation, and that venesection was to be promptly and freely had recourse to. To this practice she positively refused to submit. Leeches and fomentations were applied to the abdomen, and the *Liq. Opii sedat.* given in full doses. The pain of the abdomen, and its tenderness on pressure, soon subsided, and the patient speedily recovered.

In the treatment of two diseases so diametrically opposite, and yet distinguishable from each other with so much difficulty, the author very naturally asks, how are we to proceed? and, for the purpose of directing our conduct in this very essential particular, he has laid down some very judicious rules. The first and most important object is to apply the remedies, whatever they may be, at the very outset of the disease. Secondly, to approach the patient with a firm belief of the difficulty of diagnosis in these cases; and, lastly, practitioners of midwifery are directed to make themselves acquainted with those modes of treatment which appear to have been the most satisfactory. "The remedies for the efficacy of which there is most evidence are, first, bleeding and purging; second, emetic doses of *ippecacuanha*; third, opiates internally, and poultices externally to the abdomen; fourth, mercury given so as to affect the constitution; fifth, oil of turpentine." (P. 101.)

An attention to the nature of the prevailing epidemic is also of the greatest use in guiding the practitioner to the proper method of conducting the treatment of this hazardous complaint.

Such is an abstract of the observations of Dr. Gooch on this perplexing subject. With the candour which invariably accompanies real ability, he confesses that some parts of the subject are beset with difficulties; there is no assumption of knowledge which is yet to be obtained. Were we to object to any part of his remarks, it would be his calling that disease peritoneal fever in which he affirms no affection of the peritoneum exists. We think, also, he should have pointed out the great similarity between his second fever and that arising from inflammation of the veins of the uterus, which is generally mistaken for, and denominated, puerperal fever.*

Having entered so fully into this part of the work, we

* This species of fever has been fully and accurately described by M. DANCE, Dr. ROBERT LEE, and other writers. The interesting practical paper of the last-named gentleman will doubtless be published in the next volume of the Transactions of the Med.-Chir. Society.—REV.

find we have scarcely room to give more than a mere notice of the other diseases which have engaged the attention of the author.

Dr. Gooch's opinions on *puerperal insanity* will be perused with much instruction. He has shown, first, that in general the disease arises in constitutions enfeebled by nursing, or some previous debilitating cause, such as the depressing affections of the mind, than which no external agent can act more forcibly; secondly, that the disease is invariably rendered worse by bloodletting, and that the cure is best conducted under the soothing and "sustaining influence of opium:" deductions which no one, after attending to the reasoning of our author, will be inclined to dispute. To this part of the work are added some interesting thoughts on insanity as an object of moral science.

Of the *symptoms of pregnancy, and the diseases resembling it*, the reader will find an excellent sketch, although we are not aware that, upon these subjects, any additions are made to the knowledge of preceding writers.

The section on *polypi of the uterus* is an excellent practical lesson.

Dr. Gooch next gives a description of a disease with which the profession have hitherto been unacquainted, under the name of *irritable uterus*, "which (he says) is a painful and tender state of that organ, neither attended by nor tending to produce change in its structure; the causes (he adds) to which this disease has been attributed, and after the application of which it has occurred, are generally considerable bodily exertions at times when the uterus is in a susceptible state." For the treatment of this painful complaint, which is not uncommon, and which the author thinks bears a considerable analogy to the irritable mamma lately described by Sir ASTLEY COOPER, he recommends bloodletting, rest, and narcotics, and more particularly henbane. In some cases he found opiate enemata, hipbaths, mercury, external irritation, and chalybeate waters, of advantage. This complaint is generally long and intractable.

The author next notices a species of *hemorrhage*, which occurs when the uterus is firmly contracted, and which depends on an excited state of the circulation. It is cured, or rather prevented, by depletion.

The volume concludes with an account of "the symptoms in children erroneously attributed to congestion of the brain;" and an appendix, containing a paper which was published in the *Quarterly Review*, entitled "Is the Plague

contagious?" For this paper Dr. Gooch received the thanks of his Majesty's ministers.

In this work, the subject of the greatest importance which the author has discussed is undoubtedly that of peritoneal fever, both on account of the diversity of opinion as to the pathology of the disease, and because he has brought forward much matter towards its elucidation. We have no hesitation in pronouncing this to be a sound, elegant, and practically useful volume; and we strongly recommend those engaged in the responsible practice of obstetric medicine to make themselves well acquainted with its contents.

An Account of the Morbid Appearances exhibited on Dissection in Disorders of the Trachea, Lungs, and Heart, with Pathological Observations, to which a Comparison of the Symptoms with the Morbid Changes has given rise. By THOMAS MILLS, M.D. Honorary Fellow of the King and Queen's College of Physicians. —8vo. pp. 303. Cumming, Dublin, 1829.

THE morbid anatomy of the viscera of the thorax is a subject which has of late years occupied, almost exclusively, the attention of some of the greatest pathologists whose names are recorded in the annals of medical science; and the works of CORVISART and LAENNEC, the labours of a lifetime, have embodied every thing known in reference to these diseases previous to their times, and have enriched and extended that knowledge, and rendered it so accurate and available, that it appears almost to border on temerity for any one, who has not enjoyed the most extended opportunities of observing these complaints, to attempt to add any thing new, or to overturn any of those opinions deduced from such a mass of experience; and the critic, who regards the title of a book like the present, is almost tempted to pass a condemnation on it, even before he has perused it. It ought, however, to be remembered that medicine has been greatly retarded in its progress towards improvement, by its professors being dazzled by the brilliancy of the opinions of men of great reputation, and not attempting to examine minutely the basis on which these rest. A book of cases, too, which is the nature of the work now before us, if they be narrated with truth, is always a valuable performance; for although separately they may be of little utility, yet, when combined and compared with others, they frequently lay the foundation for the most solid and useful improvements. The science of medicine, which is one in a very great degree of observation, must ever be indebted

for its advancement to the continued exertions of many: "for thus it is that canals are formed and mountains levelled by the slender force of human beings."

The author is already known to the profession by a work on Disorders of the Brain, and in the present volume he has followed the same plan which he adopted in that, viz. of relating minutely many cases, and attempting, from the history of those which terminated unsuccessfully, in connexion with the morbid appearances on dissection, to explain their real nature, and to deduce the proper method of treatment: the latter he has also endeavoured still more to establish by the account of many whose successful course seems to support his views.

The work is divided into three portions, which comprehend the diseases of the trachea, lungs, and heart.

Under the head *Trachea* are classed two disorders, cynanche trachealis and cynanche maligna. The former he has repeatedly met with unaccompanied with that croupy noise in respiration by which it is commonly distinguished; and he asserts that, as far as his experience goes, there is no such thing as spasmodic croup, or croup unattended by inflammation; a statement with which many pathologists of the present day agree.* Of the acute form of croup, the author has related, with much accuracy of description, several interesting cases, one of which terminated fatally in twelve hours. The disease, in most of these instances, had been preceded by measles; and the author is of opinion that the inflammation spread by contiguity from the skin of the face to the mucous membrane of the trachea. Of the chronic form he has also given several examples.

On the nature of the disease, the author makes the following remarks:

"A spasm of the larynx or trachea, or of both, accompanies most cases of croup, and in many instances the danger is in proportion to its duration and the degree of its intensity. The spasms are induced by inflammation of the lining membrane of the wind-pipe, and their mildness or violence commonly depends on its degree and extent. To this general rule, however, there are

* It is true that the opinion that there is no such disease as spasmodic croup is not opposed even by CULLEN, the firm, if not pertinacious, supporter of the theory of spasm. For ourselves, we have no abstract hypothesis to contend for; but we have so often witnessed the sudden occurrence of the symptoms which are deemed most characteristic of croup, without any local or general signs of inflammatory action, and the equally sudden disappearance of such symptoms, without the intervention of any anti-inflammatory treatment, that we have no doubt whatever of the occasional existence of a pure form of spasmodic croup.—EDITORS.

exceptions; for, in one post-mortem examination at which I was present, the marks of inflammation were not unusually striking, yet the spasms were urgent, and apparently caused the death of the patient." (P. 22.)

His treatment of this dangerous and frequently fatal disorder corresponds to his views of its pathology.

"Bloodletting, general and topical, blistering, emetics, cathartics, and the hot bath, are the proper remedies, and they should be employed in quick succession. In the first instance, blood should be taken from the jugular vein or arm; leeches are then to be applied to the external fauces; an emeto-cathartic is to be immediately exhibited; and, as soon as possible, the patient is to be immersed for fifteen, thirty, or forty minutes in a hot bath, during which time the bleeding is to be encouraged from the orifices made by the leeches. If these remedies fail to produce relief, a blister is to be applied to the external fauces; or, what is more efficacious, boiling water, which often arrests the progress of the disease when employed at its onset. After depletion, calomel and opium should be given in large or small quantity, as may be deemed requisite." (P. 28.)

In chronic cases, the author found remarkable benefit produced by the use of the tartrate of antimony ointment, which he recommends in the strongest manner.

Of the numerous cases of disease of the *Lungs* which the author has related, it is rather difficult for us to give an idea, for they have not been classed with that scientific accuracy which their complicated and extended nature requires. They are, however, principally examples of inflammatory affections of the mucous membrane of the lungs, of ulceration, and the various changes produced in these organs by the disease denominated phthisis, complicated with inflammatory affections of the heart and other organs, and in one or two instances accompanied with cerebral effusion. He has also detailed several cases of tubercular phthisis, terminating in what he terms scirrhus and cancer of the lung; and has supported the theory that tubercles are nothing more or less than scrofulous lymphatic glands.

In cases of asthma, he found that ossification of the cartilages of the ribs, and chronic inflammation of the heart and of the lining membrane of the air-tubes, was a common occurrence; and, in some instances of obstruction of the lungs, he discovered, on dissection, a collection of watery fluid in the pericardium, without any disease of the heart itself.

A great many of the cases related are such as every

practitioner must be in the daily habit of meeting with, and therefore it would be useless for us to make any extracts from them. It may be as well, however, to remark, that in those where the author found a difficulty in making a correct diagnosis, we think he might have been greatly assisted by the use of percussion and the stethoscope, and by an attention to those more minute symptoms which have been so precisely described by Laennec and Andral.

The author's opinions in reference to the origin of tubercles and the nature of phthisis, are best explained in his own words: "Were I allowed to form an opinion on this subject, grounded on observation and experience, I would say that the scrofulous tubercles of the lungs are lymphatic vessels, or a congeries of lymphatic vessels, called glands, in a state of inflammation and suppuration;" and the following are the grounds of this opinion:

"The existence of lymphatic glands in the lungs (the bronchial excepted,) has not been proved, but none deny the existence of lymphatic vessels. What are lymphatic glands but a congeries of lymphatic vessels joined together by cellular texture? In the bronchi and mesentery they are visible in a state of health; in the cervix, axillæ, groins, arms, &c. they are visible only in a state of disease, and then they are denominated scrofulous glands: so it is with the lungs; they too abound with lymphatic vessels and glands, but these are only apparent when enlarged by disease, and then they are designated scrofulous tubercles; and, whether in the lungs or the neck, they present the same symptoms and appearances." (P. 121.)

Of all the theories which have been advanced to account for the origin of tubercles, whether by Laennec and Andral, by Alison and Broussais, or by Jenner and Baron, this appears to be the most improbable, and is unsupported by any conclusive evidence whatsoever. The author, in proposing it, must have overlooked the numerous cases of Laennec, proving that tubercles may originate without any preceding inflammatory action. The assertion, also, of the author, that the lymphatic glands in the arms and axillæ are only visible in a state of disease, is certainly erroneous, for they can be readily detected by the hand of the anatomist.

Our author appears to have confounded old hepatisation and that condensation of the parenchyma of the lung which generally takes place in the immediate vicinity of a tuberculous excavation, for scirrhus and cancer. True scirrhus has been occasionally found in the bronchial glands, and more particularly in those patients who have died of open

cancer of the mamma; but we are not aware of any case on record where it has been found to pervade the substance of the lung. The author's description is the following:

"In the left lung are numerous tubercles of different sizes, some of a cheesy or fatty nature, others in a state of ulceration; a considerable portion of this lung is converted into large irregular ulcers, the sides and edges of which are hardened and covered with purulent matter of a slate colour." (P. 93.)

On which he makes this comment:

"This is a case of tubercular phthisis, which terminated in extensive irregular ulceration and scirrhus of the left lung resembling cancer. Would not this and similar instances of scirrhus of the lungs tend to prove the existence of lymphatic glands in this organ?" (P. 94.)

The appearances ought, we think, to be attributed to that condition to which we have just alluded.

The cases of disease of the *Heart* are also numerous and interesting, but, like those of the lungs, they have not been classed under heads sufficiently definite and scientific either to enable the author to make proper deductions from them, or to render it easy for us to give an abstract of them. The greater portion are, however, instances of inflammation, acute or chronic, producing disorganization of the substance, and adhesions and other changes in the coverings of the heart, complicated, in some instances, with diseases of the valves; in others, with affections of the lungs, of the liver, and other viscera.

Two instances of angina pectoris are also recorded, in one of which the coronary arteries were completely ossified. The author has also given several well-marked examples of rheumatic inflammation of the heart.

The general method of treatment adopted in these cases may be gathered from the following paragraph:

"I have been emboldened to act with decision and firmness, unhesitatingly to employ evacuants where a weak and irregular pulse, and other symptoms of debility, have seemed to forbid their use; because dissection has taught me that, even where these symptoms existed, there was obstruction and inflammatory tendency, or actual inflammation, and that any other mode of treatment was either nugatory or destructive." (P. 267.)

From the cases related, the author thinks that he is entitled "to infer that diseases of the heart are often of an inflammatory character:" an inference, it may be well to remark, which is universally allowed at the present day; and we therefore think that he is hardly justified in stating

that "they are usually classed with the affections, called nervous, and considered as arising from debility: tonic and stimulating remedies, bark, wine, steel, valerian, &c. are usually administered."

The author also concludes, that angina pectoris generally proceeds from other affections besides ossification of the coronary arteries; a deduction which is by no means an original one; for Dr. HAYGARTH, long previous to his time, attributed it to inflammation of the mediastinum; Dr. HOOPER, to diseases of the pericardium; and Dr. HOSACK and Dr. FORBES to general plethora. Some have considered it to be a neuralgic affection of the cardiac nerves; and even Dr. PARRY, who first described the disease as depending on ossification of the coronary arteries, admits that there is also present an accumulation of blood in the heart and its large vessels.

This work, of which we have endeavoured to give our readers the outline, is certainly greatly deficient in arrangement; for, after the minute divisions which previous pathologists have established in reference to these complicated disorders, we should hardly have expected to find any author arranging them under two such general heads as "diseases of the lungs" and "diseases of the heart;" nor, as we have already stated, do we think it possible to deduce from so many dissimilar affections, mingled together in this way, those practical inferences which might otherwise have been drawn from them.

The volume is, however, valuable on account of the accuracy with which the cases are detailed, and more particularly for the description of the morbid appearances on dissection. The treatment of the patients, too, appears to us to have been highly judicious; and, on these accounts, we think that the author is well entitled to the attention of pathologists and practitioners.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, ltidem, depascimur aurea dicta.

PATHOLOGY.

Occasional Fallacy of the Pulse in Hectic Fever.—DR. HEBERDEN observes, "that there are not many diseases in which an attention to the pulse affords more instruction than it does in hectic fever. Yet, even here, whoever relies too confidently upon the state of the pulse will in some cases find himself misled; for it happens, as well as I can guess, to one among twenty hectic patients, that while all the powers of life are declining, with every sign of an incurable mischief, the artery will, to the last minute, continue to beat as quietly and as regularly as it ought to do in perfect health."—*Commentaries*, p. 191.

Case of Suppression of Semen, from Inflammation of the Prostate and Vasa Deferentia. By DR. SCHÜTTE.

This disease occurred in a labouring man, who had worked in a marsh for two days, standing in water up to his knees with naked limbs. He was married; and, though he had natural erections, and coition was attended by the usual sensations of pleasure, no emission took place. On examination by the rectum, the prostate was found tumid, and the surrounding parts inflamed. He was kept upon light diet, and requested to abstain from sexual intercourse. Antiphlogistic means were also employed. Leeches were applied to the perineum; and citrine ointment, mingled with sal ammoniac and extract of cicuta, were afterwards rubbed upon the same place. In five weeks the prostate had nearly regained its natural size, but still no discharge followed connexion. Dr. Schütte then ordered an injection of tartar emetic, which was persisted in for eleven days. This immediately caused great pain and an excessive discharge of mucus. On the seventh day from its application, the discharge of semen *in coitu* was perfectly natural. An infusion of bitters, and a solution of sal ammoniac, were given, to strengthen the stomach and remove the remaining enlargement of the prostate. The patient was entirely restored to health.—*Græfe und Walther's Journal der Chirurgie*.

Remarkable Case of Abdominal Dropsy. By J. M. BARDSLEY, M.D. &c.

Mrs. B., sixty years of age, was seized with swelling of the abdomen after exposure to wet and cold. The belly rapidly increased in size, and tapping became necessary. General health unimpaired. Thirst rather urgent. No cough.

1772.—The first operation was performed February 26th, and twenty-six pints of pale-coloured fluid were removed. In March, April, and May, fifty-two pints and a half were drawn off, at three different times. No further collection took place until December.

1774.—She was tapped on January 13th, and thirty-six pints were removed. In each month of this year the operation was repeated, and 312 pints were removed.

1775.—Tapped fourteen times: twice in January, and twice in December; once in each of the other months: 370½ pints were drawn off in the course of this year.

1776.—Twice in July and December, and once each other month; 352½ pints being the quantity of fluid drawn off.

1777.—Twice in August, and once each month until that time; amount this year, 244 pints. The patient died in September of dysentery.

Remarks.—This case appears to me to possess considerable interest. It affords proof of the enormous quantity of fluid that may be formed at successive intervals in the abdomen, without occasioning any material derangement of the general health; for the only inconvenience experienced by this lady was the excessive weight she had to support previously to each operation. Several cases are on record in which great and frequent accumulations of fluid have taken place in the abdomen; but I do not recollect more than two or three where the operation of tapping was performed fifty-three times, and 1394 pints* were removed from the same individual. Another circumstance worthy of notice is the impunity with which so frequent a repetition of the operation was borne, affording proof of the little danger or inconvenience from the practice of tapping, when properly performed. Some practitioners seem to view this operation with a certain degree of alarm, and thus do not resort to it so soon as in most instances is desirable. I have had many opportunities of witnessing the bad effects of unnecessary delay in recommending *paracentesis abdominis*, as well as the great benefits attending an early evacuation of the abdominal fluid. When the ordinary remedies in ascites have been fairly tried during a moderate length of time, and the accumulation of fluid increases rather than decreases under their use, it is of the first importance to direct immediate tapping of the belly, as affording the patient the only chance of cure. Dr. FOTHERGILL has energetically given the same advice. In itself the operation is extremely simple, and it has been shown that, under ordinary circumstances, little or no danger attends it. "Paracentesis," as Mr. S. COOPER has judiciously remarked, "only becomes a serious measure when the disease has existed for a great length of time, and the patient has been much weakened by it."—*Edinb. Med. and Surg. Journal*, April 1829.

Case of Anæsthesia, or Loss of Sensation, unattended with corresponding Loss of Motion. By A. REID, Esq. Surgeon. (Communicated by Mr. LISTON.)

Mr. Walker, æt. fifty-six, tall and stout, and walks very erect. He is a person of humour and wit, and a good mimic. Mental powers but little impaired. Disposition perhaps rather more irritable than formerly. It was during his residence in Jamaica that the disorder first attacked him. About 1802, he fell from his horse, fractured some ribs, and injured the sternum. In consequence, he was confined to his back for several weeks, and for some time after that he was not able to walk. He gradually recovered, although he felt at this time a numbness commence in the right hip, extending to the toe. Two years after, in leaping, he sprained the muscles of the back situated over the lumbar vertebræ. He could not move without severe pain in the part. Upon his recovery, he found the numbness of his right leg rather increased, although he was still able to transact his business. No change took

* The quantity drawn off in this case.

place till 1812: he was then attacked with erysipelas in the right leg and foot, from cold. The left leg was afterwards affected. Both legs were now benumbed and insensible to the prick of a pin. His left foot was the weaker of the two. His limbs swelled occasionally, and were covered with a disagreeable eruption. In the warm bath he knew not whether the water was hot or cold, until immersed above the middle of the thigh, even although his feet and legs were in this condition. "He felt as if covered with a stocking or boot, or as if sleeping." He could still take proper exercise.

In 1815, he tried a sea voyage, and a residence in his native country. He arrived in Scotland in July. His mind and body were vigorous. The want of feeling was still increasing throughout the body. He now returned to Jamaica, having taken medical advice in London and Edinburgh without benefit. Upon his arrival, he thought himself rather better.

This amendment was not permanent. He found the heat of the sun insupportable; quite different from what he formerly felt it. He now unfortunately bruised his foot, and injured the metatarsal bone of the little toe, by which a troublesome sore was caused. His health he thought suffered from want of exercise, which he was not able to take regularly, on account of this accident.

He returned in 1818 to Scotland, worse than when he left it. In 1823, it was found necessary to remove the metatarsal bone,* which was carious, and produced great constitutional irritation. Mr. W. felt not the smallest pain during the operation.

The sentient power was now nearly, if not completely, annihilated over the whole surface of the body. Power of motion impaired, but he can carve his food, write, &c. He can also walk a short way, even without a staff. He says, "The want of feeling continued to increase slowly, and from my legs extended to my hands and arms, till I lost the feeling of finger after finger. The skin of my brow and head is also affected. I feel with nothing but my mouth: i. e. I am incapable of telling whether any thing I touch is cold or hot, rough or smooth. I am, generally speaking, in possession of my ordinary functions. With regard to the sensation of my feet and hands, (and these I am at a loss to describe,) when cold, which they generally are, they feel heavy and stiff. When attacked with rheumatism, or when blistered from going incautiously too near the fire, (an accident of which I am not conscious at the time,) or when matter is gathering, they feel as if tight bound in a boot, and very heavy, accompanied with restlessness and stretching all over the body. This was exactly the sensation produced by the evacuation of matter which so often took place from the diseased bone. I felt no pain whatever when you extracted the bone from my foot, nor would I now, I am convinced, were you to dissect the whole foot. When driving or riding, I cannot tell, unless I see, whether or not I hold the reins or whip. My taste, smell, and hearing, are perfectly entire. Sight weak. My feet and hands are to a certain extent paralysed; that is to say, I have not the same power of motion in them which I had in a state of health, nor even a few years ago, when the want of feeling was nearly as great as it is at present."

Mr. W. is a living instance of abolition of sentient power, not only in the skin, but also in the deep-seated muscles, tendons, and ligaments, as was shown in the operation; while the power of the nerves of the other external senses remain entire, and perform their functions in a perfect manner. The

* The bone is in Mr. Liston's museum.

internal functions obey the will, and each acts correctly under the influence of their peculiar stimulus, as in a state of health. Even the *sensorium commune* is able to carry on its intellectual operations. The motive power, which at first was little affected, appears now to be getting involved in the wreck of the sentient. The extensor muscles appear more paralysed than the flexors. The reason of this is, from greater extent of muscular power being required for flexion than extension, the muscles are stronger, or additional ones are given for flexion. No more is needed for extension than almost to balance the power of the flexors.

This case confirms the physiological and pathological doctrines of Mr. C. BELL and others, relative to the double functions of the *medulla spinalis* and brain. The paralytic affection is not now confined to the lower extremities. The trunk, neck, face, and head are affected, showing distinctly that the brain has participated in the diseased structure of the spine, which was certainly injured at the time the first accident took place. It is remarkable that a diseased brain should be found capable of carrying on its intellectual operations so very entire. There are, however, some well-authenticated cases on record where the structure of the brain was diseased, and where a great part of it had been removed by absorption, leaving nothing but a cavity, yet without impairing the mental faculties.

The gentleman, whose case is above described, is still living, and can even enjoy life.—*Ibid.* (Condensed.)

PRACTICAL MEDICINE.

Singular Treatment of Traumatic Tetanus.—We take the following extract from a review of Dr. W. REID's work on Tetanus and Hydrophobia, in the *American Journal of the Medical Sciences*. We were not ourselves aware of the fact stated :

“ It may be proper, as a matter of curiosity, merely to allude to an extraordinary practice among the inhabitants of the Tonga, or Friendly Islands, in the South Pacific Ocean, among whom we are told traumatic tetanus prevails to a great extent. It consists in producing a considerable degree of irritation in the urethra, and a discharge of blood from that part by the introduction of a reed of proper size for some distance into the canal; and, when the case is very violent, by passing a cord along the urethra through the perineum, the two ends of which are occasionally pulled to and fro, inducing great pain and a copious hemorrhage, with much swelling and inflammation of the penis. By Mr. MARINER, from whom we derive the account of this strange and unpromising practice, it is stated that he witnessed two cures of confirmed tetanus from it. Every fact relating to the treatment of this disease is interesting, and, without advising this precise mode, it may suggest a principle capable of improvement. It was, indeed, somewhat on this principle that Dr. BROWN, of Lexington, many years ago, proposed exciting strangury as a cure, and bore some evidence to its efficacy.”

Effects of Blisters.—Dr. HEBERDEN* observes, that it is one among the many instances of our imperfect knowledge of the animal economy, that we can by no means understand how the cantharides should pass so quietly without

* Commentaries, p. 416.

harming the various passages, and some of them of exquisite fineness, through which they are carried to the bladder, and yet irritate this part in that extraordinary manner which is too often experienced from the application of blisters. The difficulty of accounting for the above fact is increased by our finding that one blister has sometimes occasioned this irritation, though afterwards, in the same person and the same illness, five blisters applied at once have had no such effect; and what is called a perpetual blister, after it has been kept open seven years without at all affecting the bladder, has all at once, and without apparent reason, acted upon it so powerfully as to render the removal of the blister absolutely necessary.*

Chorea.—Dr. HARROWER has recently detailed a case of this generally obstinate disease, in the Glasgow Medical Journal, which was cured by the application of the tartar-emetic ointment so as to produce pustules on the scalp, and afterwards keeping up the discharge for a short time.

Upon the Application of Lunar Caustic in the early Stage of Angina. By M. TOIRAC. (*La Clinique.*)

Cauterization by nitrate of silver, at the commencement of angina tonsillaris, almost always, it is said, arrests the disease. M. T. relates the following cases from his extensive experience upon this subject:

CASE I.—For several years M. Toirac himself had been liable to pain in the throat, of uncertain duration, which generally arose from cold, or some deviation from his ordinary habits. Rest, mild diet, and sometimes, but very rarely, leeches, were sufficient to remedy this complaint. But the disposition which always remained to a recurrence of the disease subjected M. T. to many and tiresome precautions to prevent such repeated attacks. He determined to break through the morbid disposition of the parts; and for this purpose he had recourse to the caustic, which surpassed his expectations. When he first applied it, the right tonsil was tumefied, the palate was red and granulated. The velum pendulum palati presented the same appearances. Deglutition was difficult, and the uvula somewhat elongated, and marked with red streaks. The tongue was depressed, and each part which had the most florid appearance, and which was the most painful, was touched with the lunar caustic. In one hour every disagreeable sensation subsided.

Since this experiment M. T. has always had recourse to the same treatment in similar cases, and it has invariably been successful. The application of the caustic to the mucous membrane lining the mouth gives no pain, although the copperish taste which follows is rather disagreeable, and sometimes produces nausea. The apprehension of increasing the inflammation by this mode of treatment, is entirely chimerical.† The same observation, we are assured by M. T., will apply to cauterization by a hot iron. “I daily have recourse to it (*le fer rouge*,) for some particular affections of the gums: its application to the affected part produces scarcely any unpleasant sensation. Sometimes,

* RICHERAND, *Physiologie*, tome i. p. 43.

† In confirmation of this statement, we refer to the experience of Mr. HIGGINBOTTOM, of whose work upon the use of Lunar Caustic in various inflammatory diseases a review is given at page 521 of our last Number.

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indeed, the patient is almost unconscious of it, and is only aware of the operation from the hissing which results from the contact of a heated iron to a humid part!"

CASE II.—Mademoiselle A. G. had been frequently subject to sore throat. The same treatment was adopted with similar advantage. The tonsils were previously much enlarged, but afterwards they presented nearly a healthy appearance. Whenever she now experiences any precursory symptoms of her former malady, she has recourse to the *argentum nitratum*, and in a few minutes she is relieved from all inconvenience. It is proper to observe that this patient had frequently been submitted to the ordinary modes of treatment. Her neck was covered with numerous leech-bites. The slightest exposure to cold, particularly if her neck was uncovered, had always caused an attack of sore throat, to which she was, after the above treatment, not more disposed than the generality of people.

CASE III.—A young lady had, from five years of age, been frequently subject to affections of the throat. Her tonsils had sometimes been so much enlarged as to threaten suffocation. By the application of the *Nitr. Argent.* the malady disappeared, as if by enchantment.

M. T. refrains from adding many similar cases in corroboration of the efficacy of the treatment he proposes. We are not to imagine that bleeding, and other remedial means, may not be requisite in some cases.

SURGERY.

Nævus Maternus cured by Vaccination.—Catherine Strathern, eight months old, was brought to the Glasgow Royal Infirmary in the month of September, having a *nævus* on the lower part of the forehead, half an inch above the left inner canthus. It was as large as a hazel nut, and of a dark red colour. It was observed at birth, and was then quite level with the surface. After a month it became elevated. Having never been vaccinated, fresh lymph was inserted by minute punctures, both around the circumference and over the whole extent of the tumor. On the eighth day many small pustules were visible, and by the twelfth they had coalesced and become incrustated. On the twenty-first the scab separated, leaving the surface underneath tender and slightly prominent. A second crust succeeded, and to this a third and a fourth; a perfect cure being effected in about six weeks.

The narrator of this case is of opinion, that it is indispensable to the ultimate success of the practice that the lymph should be freely introduced over the diseased surface, as well as around its circumference. In this way the adhesive inflammation which is excited appears to extend from one pustule to another, and in the course of a few days the whole becomes involved in one scab.

Case of Tracheotomy. By ZADOK HOWE, M.D. of Billerica, Massachusetts.

A daughter of Mr. French, of Tewksbury, three years and a half old, on the 21st of September last, while at play in the garden, took a bean into the trachea.

I saw the child two hours after; but, as we had no means of ascertaining the nature of the foreign substance, and as the symptoms were not very urgent at the time, I heard nothing more of the case till the 28th. The child was then labouring under frequent and distressing paroxysms of coughing,

attended with suspended respiration and other urgent symptoms, which clearly indicated the necessity of an operation. It was proposed, and immediately assented to by the parents. It was evening; and, as I was unprepared for an operation, it was postponed till the next day, when, with the assistance of Dr. DALTON, of Chelmsford, it was performed in the following manner:

A heavy table was provided, with the side leaves turned down, leaving a horizontal surface, sixteen inches wide, covered with blankets, with a firm roll of cloth four inches in diameter across the end.

The child was firmly secured on the back by the hands of assistants, the nape of the neck resting on the roll of cloth, the head carried far back over the end of the table. An incision was made from the lower edge of the thyroid cartilage to within a quarter of an inch of the sternum. After waiting a few moments for a slight bleeding to subside, a puncture was made into the trachea with a slender double-edged scalpel, in the centre of the incision, dividing one cartilage; then, with a curved, probe-pointed bistoury, the puncture was dilated from within outwards, dividing one cartilage above and one below. In this elongated state of the parts, the division of three cartilages made an opening sufficiently free to admit the forefinger of the left hand into the trachea. The finger was introduced to separate the edges of the incision which did not incline to retract. Immediately after withdrawing the finger, with a spasmodic effort, a bean was expelled with considerable force, and lodged on a bed which stood in the room. This saved us the trouble of attempting that part of the operation which I most dreaded; for experience had taught me to envy no man the pleasure of probing in the trachea for beans or peas. Half an hour after, the opening still retained the shape of the finger, large and free: the divided cartilages had approximated but very little. The wound was then brought together, and secured with adhesive plaster; and, being unwilling to disturb the stomach, we gave no medicine, excepting a few drops of laudanum, at the same time directing a spare diet. The plasters succeeded imperfectly, partly in consequence of the action of the mastoid muscles, and because the opening was rather too low on the neck to admit of their being applied to the best advantage. The air rushed through the aperture occasionally for forty-eight hours, but never after.

I dressed the wound a few times, and discontinued my attendance in about two weeks. At the time of the accident, the child had not entirely recovered from the whooping-cough, but the cough troubled it very little after the operation. The wound was cicatrised at the end of eighteen days. A short time previous to this, a slight dysenteric affection took place, for which the family gave some domestic medicines. A few worms were discharged, and the child soon recovered, the cough wholly subsiding at about the same time.

The result of this case may, I think, be attributed in part to the position of the child when the opening was made. By carrying the head very far back over the cylinder of cloth, the trachea became considerably curved.

In the act of coughing, the bean was suddenly carried from one end of the trachea to the other, and, when forcibly propelled, would probably incline to the longest side of the curved tube: the opening being in that part, and as large as the cavity of the trachea, we had some reason to expect what actually took place, the expulsion of the bean. By introducing the finger, and turning it a quarter round, the elasticity of the cartilages seemed to be destroyed, or at least suspended for a length of time sufficient for our purpose. In an older

subject the elasticity might not have been so easily overcome in this manner. The operation never seemed much to affect the general health of the child; and the most difficult part of the after-treatment was to restrain the immoderate indulgence of the appetite for food.—*American Journal of the Medical Sciences.*

Re-union of a large Portion of the Calf of the Leg, which had been torn off by accident.—It occurred in the practice of Dr. GRÖSCHNER, of Spremberg. A labourer was employed with a companion in carrying timbers for a building. While he was engaged in moving a beam, carrying one end of it, having both hands behind him, and sustaining the load about as high as his loins, another piece of timber fell across that they were carrying, and struck the end violently from his grasp. The sharp corner of the beam struck him about a hand's breadth below the bend of the knee, and tore down the integument and the gastrocnemius internus muscle, nearly to the tendo-achillis. The breadth of the flap above was upwards of three inches; below, it was held to the limb by scarcely a finger's breadth of integument alone. The persons who conveyed the man to his house had re-applied the flap of flesh, but, to check the bleeding, had washed the limb with brandy, and wrapped it in cloths wet with the same. Dr. Gröschner removed these, and applied adhesive straps. The patient did well for a few days, but soon became very low, and at length had regular hectic and night sweats. Finding little prospect of adhesion, Dr. G. made use of sutures, and a wash to stimulate the integument to a higher degree of action, administering to the patient at the same time Peruvian bark in considerable quantity, and a nutritious diet. To his great satisfaction, adhesive inflammation took place, and the whole mass became firmly united.

If the violence of the shock to the limb be recollected, and the fact that the mass of the gastrocnemius detached was to derive its circulation, exclusively, through little more than half an inch of integument at the inferior part of a lower extremity, we may regard this cure as a triumph of considerable magnitude. The patient was able to resume his business on the twenty-ninth day after the accident, notwithstanding all the fluctuations of health he had undergone in that time.—*Gräfe und Walther, Journal der Chirurgie und Augenheilkunde.*

On the Cicatrization of the Womb after the Cæsarian Section had been successfully performed; by Professor MAYER, of Berlin.

The cicatrization of the womb, Dr. M. remarks, has rarely been examined after the cæsarean section had been successfully performed. He therefore describes the condition of a preparation added to the anatomical cabinet of Bonn, taken from the body of a woman, who, eight years previous to her death, had successfully endured the cæsarean operation, by which the life of herself and child had been preserved.

The operation was performed by HOPRATH VELTEN, in March 1813, who furnished the history of the case. The distance from the under edge of the symphysis pubis to the promontory of the sacrum was scarcely two French inches; the patient was thirty-six years old. The abdomen was opened in the linea alba, and the incision through the womb extended five inches downwards. During the division of its parietes, the womb did not contract in the

slightest degree. The infant, a stout boy, and the placenta, were removed from the womb, without any remarkable hemorrhage ensuing; perhaps not more than a pound altogether. From the difficulty of bringing the now greatly relaxed abdominal parietes together, it was necessary to resort to stitches, and this is said to have been the most painful part of the operation. The patient, when questioned after her recovery as to her feelings during the operation, stated that the sensation caused by the incision through the abdomen she could only compare to what would be produced by drawing a red-hot needle over her skin. She assured us that the incision through the womb itself did not cause her the slightest degree of pain.* In the month of May, three months after the operation, the wounds were entirely healed, and the mother and child enjoyed the best health.

Eight years after, she died, and the uterus was examined by Professor MAYER, who found it in the following condition:

The uterus had perfectly regained its natural form and consistence. The length of the womb, from the superior part of the fundus to the edge of the anterior lip of the os uteri, was two inches, seven lines (French) long. The diameter, from the insertion of one fallopian tube to the other, one inch, ten lines. On the external surface of the anterior wall of the uterus, the place of the incision through it was indicated by a furrow about one fourth of an inch long. The peritoneum adhered firmly to the substance of the womb at this point, and covered the furrow above mentioned. The edges of the wound through the uterus were extremely contracted and drawn inwards; the cicatrix on the inner surface was two lines and a half long. It here projected into the cervix uteri, and commenced by a depression a line and a half broad. The anterior wall of the womb in the vicinity of the cicatrix was three lines thick; the posterior, opposite thereto, four. The mouth of the uterus was natural; but a long, thin, fleshy polypus descended from the cervix. The fallopian tube and ovary of the left side were natural; on the right side, the tube and ovary were grown together. Several cicatrices appeared on the ovaries.

From the foregoing description, it appears that, as no new-formed mass occupied the place of the wound made in the uterus by the cesarean section, but the edges were directly united, the union took place either by the first intention, or the intermediate substance (if such had existed) was subsequently absorbed.—*Ibid.*

Remedy for Opacity of the Cornea.—The following combination is recommended in the *Journal de Chimie Medicale*, &c. for September 1828, as an useful application to promote the absorption of the effused lymph in opacity of the cornea.

Rx. Oxyd. Hydr. rub., Agaric alb. aa ʒss.; Sacch. alb. ʒi. Misce intim. et pulv. subtill. A small portion to be blown into the eye daily.

Lithotomy.—Of eighty-three operations by the lateral method, performed by M. J. M. VIRICEL, at the Hôtel Dieu of Lyons, eighty were successful.—*Revue Médicale.*

* “Beim Einschnitte in den Uterus selbst gab sie uns die Versicherung, dass sie davon nicht den mindeste Schmerz empfunden habe!”

MIDWIFERY.

Extra-uterine Fartation.—Ellen Bryan, a married woman, aged thirty years, became pregnant in the year 1821. At the period of her expected parturition, she felt something break off from its place inwardly, and she was visited by her medical attendant. But the time passed away without any delivery, and without any diminution of her abdominal bulk. A new state of gestation supervened in a year and a half afterwards, and terminated, at the end of nine months, in the birth of a full-grown female infant. At the expiration of about two years more, Bryan gave premature birth to a live babe, which seemed to have attained only the close of the sixth month. She again, for the fourth time, became pregnant in 1826, and was, after seven months' gestation, delivered in Cork-street Hospital of a child, which, like the preceding one, survived its birth only a few hours. The original tumor remained unabated.

I first saw this poor woman upon her admission into one of my wards, on the 19th of May, 1827. The following state of disease presented itself to my observation: Countenance pale, dejected, and expressive of long suffering; eyes sunken; much general emaciation, pulse slightly accelerated, and extremely weak; abdomen of immense bulk and prominence, palpably enclosing a large solid substance like a fœtus; the centre of this prominence pointing forwards, and exhibiting an incrustrated ulcer on its apex, a little below and to the right side of the umbilicus. *Diarrhœa.*

21st May.—The incrustation at the apex of the above mentioned prominence has detached itself and fallen off, and has left an aperture into the abdominal cavity, from which there is a discharge of much fetid matter, partly ichorous and partly purulent.

27th.—*Diarrhœa* unabated; abdominal pain not acute, except when it is rendered so by pressure, or by an unfavorable position of the patient; a most offensive odour emitted from the open abdominal ulcer; a gradually increasing dilatation of this aperture; a feeling on the part of the patient of being hurt interiorly by a bone. She takes a night pill containing one grain of opium; and, with a view of obviating as much as possible her hourly increasing debility, I direct for her four grains of sulphate of quinine twice a day, and twelve ounces of port wine, which she likes much.

9th June.—The abdominal aperture was hourly becoming larger. It was so wide yesterday as to expose to view the entire cause of this poor woman's tedious malady: viz. the inanimate body of a full-grown male infant, which lay out of the womb in the abdominal cavity during more than the preceding six years. It has been taken out by our very intelligent surgeon, Mr. TRANT, and is preserved in spirits of wine. It is covered with a semi-coriaceous cutis, that is particularly distinguished over almost the whole of the surface of the shoulders, back, and seat, by an adipocire-like appearance. Our poor patient is barely alive. Her pulse is scarcely perceptible. Portions of intestine have been destroyed by abrasion and sphacelation, and the feces pass out anteriorly through the opening.

13th.—She has ceased to exist.

14th.—Of the appearances exposed to view by the anatomical examination of the body, the following are the principal: An ample cyst, containing much pus, is situated behind and a little above the right side of the fundus uteri. The thick envelope of this sac consists in a prolongation of the peritoneum,

especially of the right ligamentum latum. The right fallopian tube is distinctly traceable from both ends towards its centre, where it is connected with the external side of the parietes of the cyst, and is there lost in consequence of its being confounded with this envelope. The right ovarium is somewhat flattened on its posterior side, where it is close to the adjoining side of the cyst. The left ovarium, and corresponding fallopian tube, are sound, and in their natural situations. The uterus is sound, and does not bear the slightest vestige of any former laceration or of any kind of disease.—*Appendix to Dr. O'REARDON'S Report of the Dublin Fever Hospital.*

NATURAL HISTORY.

Instinct of Spiders.—A small spider (*Epeira diadema*, Latreill,) had spread its net between two neighbouring trees, at the height of about nine feet. The three principal points to which the supporting threads were attached, formed here, as they usually do, an equilateral triangle. One thread was attached above to each of the trees, and the web hung from the middle of it. To procure a third point of attachment, the spider had suspended a small stone to one end of a thread; and the stone, being heavier than the spider itself, served in place of the lower fixed point, and held the web extended. The little pebble was five feet from the earth. The whole was observed, and is described, by Professor WEBER, of Leipsig.—*Archive für Anatomie.*

On the Sexual Instinct of Insects. By J. H. DAVIES.—It has been asserted that the circuitous flight of the butterfly tribe arises from one sex pursuing through the air the track of the other; and that, if an unimpregnated female of the *Phalæna quercus* (egger moth) be carried in a gauze cage into the haunts of that species, numbers of the males will be attracted, so as to be easily captured. I have never had an opportunity of verifying this fact; but, from a circumstance which occurred to me during the past year, I have no doubt of its correctness.

I was engaged in rearing lepidopterous insects from the larvæ, and had a great variety of the pupæ of different species. One evening I found a female *Sphinx ocellata* just emerged, which, in lifting from the floor, ran up my arm and round the collar of my coat: two hours after, on returning to my study from shutting some glass frames in the garden, a very fine male, of the same species, was fluttering on my shoulder, where the female had previously crawled. But a still more curious fact, which must appear almost incredible, remains to be stated. Two females of the *Sphinx populi* were evolved. The next day I found three males in the room. As no one had entered it in the interval, nor was there apparently any mode by which they could gain access, I was somewhat puzzled to account for their appearance. The same evening, however, the mode of entrance was made apparent, by two more males, of the same species, coming down the chimney; one of which fell into a vase standing on the fire-place, where I captured it before it could extricate itself. Afterwards, upon occasion of the evolution from the pupa state of females of the *Phalæna bucephala* and *Phalæna salicis*, the windows of my study were completely besieged by males of the same species, which, upon throwing open the windows, eagerly rushed in.—*Quarterly Journal of Science.*

MISCELLANEOUS.

Leech-bites.—Dr. LÖWENDHART mentions a method of checking the profuse bleeding from leech-bites, which is simple and effectual. The edges of the little wounds are drawn together with a fine needle and thread. The thread, being drawn through the cuticle only, gives no pain, and the bleeding is at once suppressed.—*Grafe und Walther, Journal der Chirurgie.*

Opium Eater.—Mustapha Shatoor, an opium eater in Smyrna, took daily three drachms of crude opium. The visible effects at the time were sparkling of his eyes, and great exhilaration of his spirits. An increased dose became necessary. He seemed twenty years older than he really was. His complexion was very sallow, his legs small, gums eaten away, and the teeth laid bare to the sockets. He could not rise without first swallowing half a drachm of opium.—*Phil. Trans.* xix. 289.

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

As far as we can judge from our own opportunities of observation, both in hospital and private practice, no particular disease has occurred so frequently since our last report as to justify the application of the term "prevalent."

The following case came under our notice a few days ago. We were desired to visit, without delay, a little girl, about four years old, who was said to be dying. We found her in the following state: Countenance very pallid; convulsive twitchings of the muscles of the face; skin cold; respiration short and laborious; occasional attempts to vomit; pulse nearly imperceptible. Up to the moment of the occurrence of these symptoms, the child had been in perfect health. The cause of so sudden an attack was, of course, obscure. The friends were not aware that any thing had been eaten which was likely to disagree with the stomach. A small quantity of warm white wine and water was given immediately, and the child rallied a little. In about half an hour she vomited freely, and threw up, together with the ordinary food she had taken for dinner, a large quantity of the flowers of the common liburnum, which she had eaten unknown to her attendant. For several hours she remained very languid, and on the next day appeared to be perfectly recovered.

Infringement of the Act of Parliament for Regulating the Practice of Apothecaries.

Apothecaries' Hall; May 1829.

Whereas the Master and Wardens of the Society of Apothecaries have received complaints that many persons are practising as apothecaries, both in the metropolis and other parts of England and Wales, contrary to the Act of Parliament for better Regulating the Practice of Apothecaries; but the information thus received having been frequently defective and inaccurate, they have not been able, in all cases, to take the necessary steps to enforce observance of the Act of Parliament; they therefore earnestly request that all

persons having knowledge of any infringement of the said Act, by unqualified persons practising as apothecaries in any part of England and Wales, will furnish them with such full particulars and precise information as will enable them to take the necessary steps to protect regular practitioners, as well as the public, from the mischief arising from unqualified or incompetent persons acting as apothecaries, and to enforce the law by bringing the offenders to justice.

It is requested that all such information may be communicated either by letter addressed to the Clerk of the Society, Apothecaries' Hall, London, or to the Clerk personally, at his office at the Hall, on Tuesdays and Thursdays, between the hours of one and three o'clock; where printed particulars of the requisite points of information may be obtained.

The Master and Wardens think it right to give this public caution to parents and guardians, before they article their sons or wards to apothecaries or surgeon-apothecaries, to make strict inquiry whether such apothecaries or surgeon-apothecaries are themselves qualified to practise according to the provisions of the said Act of Parliament; as no indentures of apprenticeship to persons *not* so qualified can be received by the Court of Examiners of the Society.

Information on this subject may be obtained by addressing a letter to the Clerk of the Society, or by personal inquiry as above mentioned.

The attention of the public is particularly requested to the 21st section of the Act, which enacts that an apothecary cannot recover any charges claimed by him, unless qualified to act as such under the provisions of the said Act.

(By order,) EDMUND BACOT, Clerk.

N.B. Anonymous communications of any kind cannot be attended to.

Apothecaries' Hall.—Candidates who present themselves for examination, and whose studies either commenced or were completed prior to the 1st of February, 1828, will be required to produce the following testimonials of their attendance:

1. One course of lectures on Chemistry;
2. One course of lectures on Materia Medica;
3. Two courses of lectures on Anatomy and Physiology;
4. Two courses of lectures on the Theory and Practice of Medicine;
5. Six months' physician's practice at an hospital, or nine months at a dispensary.

The above curriculum is the same as that originally enjoined in 1815, with the addition of three months' dispensary practice.

Dr. DEWEES, of Philadelphia, is preparing for publication a System of Practical Medicine. We understand it will be strictly a practical book, divested as far as possible of theoretical disquisitions, and will contain the result of nearly forty years' experience. The industry and talent evinced by Dr. Dewees in all his former publications, lead us to look forward to this promised work with the expectation of finding in it much valuable matter, especially to English physicians, who must feel anxious to instruct themselves in the pathological and practical views of their trans-atlantic brethren.

St. George's Hospital.—Dr. WILSON has been unanimously appointed physician to St. George's Hospital, in the room of Dr. YOUNG.

MEETINGS OF THE COLLEGE OF PHYSICIANS.

MAY 18TH.

First Paper: on some extraordinary Cases of Metastasis of Asthma into Derangement. By Dr. TURNER.

The first case was that of a gentleman, who, at the age of fifty, began to suffer frequent attacks of asthma, which continued becoming worse till seventy, when his breathing became suddenly easy, every symptom of dyspnoea vanishing; but he was seized with painful priapism and decided aberration of mind. These symptoms, however, observed, to a certain degree, the form and habitude of his asthma, appearing in paroxysms of from six to eight hours' duration.

This state lasted for upwards of a month, when he gradually sunk, and, for the last twelve hours of his life, he became quite rational.

The next was the case of a lady, in whom, towards the close of her life, the asthmatic symptoms appeared to yield to an attack of mental delusion.

Dr. TURNER then adverted to a case of similar metastasis related by Dr. WITHERING, in his *Treatise on the Use of the Foxglove*; and stated also that the president of the College, Sir HENRY HALFORD, had communicated to him that, during the epidemic influenza of 1802, he had attended a lady, with Dr. BAILLIE, who had been subject to attacks of asthma for many years, and who suffered so much at that time as to be for several days in the utmost danger. Sir Henry, happening himself to be confined for a short time to his own house, was surprised, on going out again and inquiring after this patient, to find that she was labouring under derangement, but relieved of all her difficulty of breathing. The derangement continued six weeks, after which the asthmatic symptoms returned; and she lived four years afterwards, quite free from any mental delusion.

Dr. Turner thought that these cases strongly confirmed an opinion advanced by Dr. HEBERDEN, in his *Commentaries*, that asthma must be considered "to be, in every instance, occasioned by a disturbance of those functions which are attributed to the nerves." He adverted particularly to the condition of sleep, which brings on a fit of asthma, and is also known to be one of the most common exciting causes of other nervous disorders, as epilepsy, paralysis, &c.

Second Paper: Suggestions for preventing the Spreading of Contagion in Gibraltar. By Mr. JEFFERY, the Engineer, whose plans for making approaches to the new London Bridge have been adopted by Parliament.

Sir HENRY HALFORD informed the meeting that he had hoped to have been able, by this time, to have laid before them the Report of the Board appointed to inquire into the late epidemic fever in that garrison, but it had not yet reached England.

The suggestions of Mr. JEFFERY, who had been long resident in Gibraltar, consisted chiefly of plans for elevating a sufficient quantity of sea water, by means of steam-engines, to cleanse out the sewers and wash the streets; and also of hints for cooling and ventilating the parched side of the rock upon which the town is built, by perforations through the rock from east to west.

JUNE 1ST.

Case of Tic Douloureux, by the celebrated JOHN LOCKE.

A literary curiosity of great interest was laid before the meeting: a case detailed by the celebrated JOHN LOCKE. This curious document was obtained by Dr. C. M. CLARKE, from Lord KING, and presented to the College. The original manuscript was laid upon the table, and consisted of a French Almanack, bound up with a number of leaves which had been originally blank, but which were filled with various notes and memoranda in the handwriting of Locke, and among others the case in question.

It has often been doubted whether Locke ever practised as a physician, but the question is now set at rest. In Lord GRENVILLE's pamphlet, entitled "Oxford and Locke," he remarks that "in the printed life of Locke, commonly prefixed to his works, we are told that he applied himself, at the University, with great diligence to the study of medicine, 'not with any design of practising as a physician, but principally for the benefit of his own constitution, which was weak.' His lordship goes on to observe, that no such motive is ascribed to Locke by Le Clerc, from whom our knowledge of his private history is principally derived; nor, indeed, is the supposition at all probable. Le Clerc, however, asserts "that Locke never practised physic for profit, though he was highly esteemed by the ablest physicians of his time." In proof of this, we need only quote the following passage from SYDENHAM: "Nosti preterea quam huic meæ methodo suffragantem habeam, qui eam intimius per omnia perspexerat utrique nostrum conjunctissimum, Dominum Joannem Locke; quo quidem viro, sive ingenio judicioque acri et subacto, sive etiam antiquis, hoc est, optimis moribus, vix superiorem quemquam, inter eos qui nunc sunt homines, repertum iri confido, paucissimos certè pares."

Lord Grenville says, that the assertion that Locke had never actually practised is "unquestionably erroneous;" and the case which we subjoin proves the correctness of his opinion.

Locke was called to see the Countess of Northumberland, who was the ambassadress at Paris, December 2, 1677. The case was evidently one of tic douloureux. It is entitled *Convulsio*, and the symptoms are thus described: Acute pain over the right cheek up to her ear; in the intervals, pain in the teeth. She was warned of the approach of the fits by a throbbing she felt in the lower jaw, where she had had a tooth drawn the previous summer. The fits had been preceded by three or four days of ordinary toothach. There was no swelling or inflammation, no flux of rheum, no external swelling, no indication for bleeding; besides which, that remedy had been tried some months before, without effect.

"It being night," says Locke, "I thought at present there was nothing to be done but to give her ladyship present ease by some topical application." He thought first of a blister, but paused till he had made some more general evacuation. He therefore ordered an opiate embrocation to the gums, which gave her much relief. On the following day (for the case is related in the form of a journal,) he again deliberated about the propriety of the exhibition of an aperient, but the extreme cold weather made him conclude in the following manner: "I apprehended that a purge, which I thought very necessary, would be dangerous in such a season, because, if weak, it might cause disorder, with very little or no evacuation; if strong, in so delicate a consti-

tution I could not tell how to venture; beside that, I feared she might take cold in the working, which might increase the mischief."

The result of his prudent caution was, that he prescribed a drop of *Æthereum Terebinthinæ* on a little lint, which she applied to the gap whence the tooth had been extracted, but it did not allay the pain; and he then ventured upon the purge, and gave a mercurial one, which "wrought very well seven or eight times."

After the operation of this medicine he prescribed an opiate draught, and during the following night she enjoyed some sleep. With occasional exacerbations, the fits upon the whole began gradually to abate in severity. He describes most accurately what we all know to be the truth in this cruel disease, how various slight causes bring on the paroxysm of pain; how touching any part of the affected side of the body (even the foot of that side), talking, or opening her mouth to eat, brought on the twitches of pain. He reasons upon this strange nervous affection very sensibly, considers what the original mischief was, and how far the extraction of the tooth had to do with the increase of the malady; and concludes that the root of the mischief lies in some harm done to the nerve connected with the tooth. The tooth itself, when it was drawn, was found to be a sound one, and its extraction so far from a remedy that it increased the violence and frequency of the fits. Locke continued in attendance till December 16th, a space of a fortnight, when he pronounced the lady ambassadress "quite well."

On Monday, Dec. 20th, he writes in his MS.:

"Memorandum: that my lady ambassadrice's gums itched vehemently after the pain was gone, and did so for several days after; and used to do so for several years before any tooth was drawn."

Observations on Insanity. By Sir H. HALFORD.

After the above had been read,

Sir HENRY HALFORD stated, that, in consequence of having understood that there was no paper for the present evening, (for Locke's case had only just been received,) he had hastily thrown together some observations on insanity. As there was sufficient time left, he would read them to the meeting.

Sir Henry observed, that, in the closet scene in "Hamlet," the following words occur:

"——Ecstasy!

My pulse, as yours, doth temperately keep time,
And makes as healthful music; 'tis not madness
That I have uttered; bring me to the test,
And I the matter will reword, which madness
Would gambol from."

The circumstance to which the learned President particularly alluded, was the expression "I the matter will reword;" and he proceeded to relate the following case, in illustration of the justness of SHAKESPEARE'S "test." He was called, last January, to a gentleman then in a state of mental derangement. A short time previous to his illness, he had sent for his solicitor, and given directions about his will. He stated his intention of adding 500*l.* a year to his mother's jointure, and of leaving various legacies; adding that his friend, the solicitor, was to be the residuary legatee. The solicitor, in the

most honourable manner, told him that he could not consent to the last part of the arrangement, unless at the end of six months he continued of the same mind upon the subject. In the interval, he was attacked with mental excitement, for which he was attended by Sir Henry Halford and Sir G. Tuthill. One day, on asking him how he did, he appeared calm and collected, and answered that he was very ill, and only anxious to settle his affairs and make his will. Next day he repeated the same expressions, in a tone and manner which induced his attendants to comply with his request, and the solicitor was sent for, who brought with him a will drawn up according to the instructions he had formerly received. This was read over to the gentleman; and being asked, after each clause, if such was his meaning, he distinctly replied "Yes, yes." The will was then executed, being witnessed by his physicians. On going down stairs, Sir Henry observed upon the unpleasant circumstance of the medical attendants becoming involved in a deed which was likely to become the subject of litigation, and proposed that they should return to him, and apply Hamlet's test, by ascertaining whether he could "reword" his will. With regard to several of the clauses, this was the case; but he stated that he had left one individual 10,000*l.*, whereas he had only left him 5000*l.*; and, on being asked to whom the residue of his fortune was to go, he answered "To the heir at law, to be sure!" Being asked who was the heir at law, he replied that he did not know. Thus, said Sir Henry, he could not "reword" his meaning, but "gamboled" from the matter.

The author then adverted to the fidelity of the pictures drawn by Shakspeare, so justly characterized by Johnson as the poet of nature. He also alluded to the writings of the ancient poets, as containing many descriptions which might be recognised by an attentive observer. He had himself seen two of the cases mentioned by Horace illustrated to the very life. One, a man of high rank, supposed himself present at a theatrical entertainment, and Sir Henry had heard him urging Garrick to exert himself in the part of Hamlet, which he supposed him then to be acting. The other case was that of a gentleman of large fortune who possessed himself of every thing he could get, but parted with nothing. He was brought from the court of King's Bench, having refused to pay for a picture which he had bought, and which was valued at 1500*l.* Sir Henry told the jury, that if they would go to the gentleman's house in Portland place, they would find 50,000*l.* worth of property: amongst the rest this very picture, with baby-houses and bangles strewed over his dining-room.

The paper was listened to with great interest, and this was increased by the very animated manner in which it was read by the learned president.

MONTHLY LIST OF MEDICAL BOOKS.

[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]

The Influence of Climate in the Prevention and Cure of Chronic Diseases, more particularly of the Chest and Digestive Organs; comprising an Account of the principal Places resorted to by Invalids in England and the South of Europe; a comparative Estimate of their respective Merits in particular Diseases; and general Directions for Invalids while travelling or residing Abroad. By JAMES CLARK, M.D. &c.—8vo. pp. 328. Underwood.

A Treatise on Syphilis, in which the History, Symptoms, and Method of Treating every form of that Disease are fully considered. By JOHN BACOT, Surgeon to the St. George's and St. James's Dispensary, and lately Surgeon to the Grenadier Regiment of Foot Guards.—8vo. pp. 280. Longman and Co. London, 1829.

An Account of some of the most important Diseases peculiar to Women. By ROBERT GOOCH, M.D.—8vo. pp. 432. Murray, London.

Answer to "Observations on the Phrenological Development of Burke, Hare, and other atrocious Murderers, &c. by Thomas Stone, Esq. &c." By GEORGE COMBE.—Anderson, Edinburgh; and Simpkin and Marshall, London, 1829.

A Rejoinder to the Answer of G. Combe, Esq. to "Observations on the Phrenological Development of Burke, &c." By THOMAS STONE, Esq. President of the Royal Medical Society of Edinburgh.—1829.

Hints for the Examination of Medical Witnesses. By JOHN GORDON SMITH, M.D., M.R.S.L. Professor of Medical Jurisprudence in the University of London.—12mo. pp. 138. Longman and Co.

METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

MAY	RAIN gauge.	MOON.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 a.m.	2 p.m.	10 p.m.
			63	69	52	29.85	29.90	44	44	ENE	ENE	Fine	Fine	Fine
21			63	69	46	30.00	30.02	44	45	ENE	NE	—	—	—
22			58	68	50	.06	.06	46	47	NE	E	—	—	—
23			60	72	52	.10	.10	47	44	E	SSE	—	—	—
24			64	75	47	.17	.22	46	46	ENE	NW	—	—	—
25			52	63	44	.29	.30	45	50	NE	NNE	Rain	—	Cloudy
26			60	68	47	.28	.22	50	50	ENE	NNE	Fine	—	Fine
27			61	67	50	.17	.16	50	46	NE	NE	—	—	—
28			62	69	50	.07	.07	40	46	NE	NE	—	—	—
29			60	67	50	.08	.08	47	46	NE	NE	Cloudy	Fine	Fine
30			46	65	49	.08	.06	45	46	NE	NE	Overca.	Cloudy	Cloudy
31			47	65	48	.09	.12	48	48	SW	W	Fine	Fine	Cloudy
June 1		●	56	69	52	.13	.16	49	47	NNE	N	Cloudy	Fine	Fine
2			65	72	61	.19	.18	46	46	NNW	NNW	Fine	Fine	Fine
3			69	77	62	.12	.02	46	43	NNW	NNW	—	—	—
4			68	73	57	.02	29.87	43	40	NNW	NNW	—	—	—
5			65	68	47	29.91	30.01	40	40	NNW	NNW	—	—	—
6			57	65	45	30.13	.15	40	42	N	NE	—	—	—
7			54	63	43	.19	.23	42	44	NW	NW	Cloudy	Fine	Fine
8			50	59	47	.23	.24	44	44	NNE	NE	Show'ry	Cloudy	Fine
9		☽	57	61	47	.23	.22	45	43	NNE	NE	Cloudy	Fine	Fine
10			58	66	48	.27	.27	43	46	NE	ENE	Cloudy	Fine	—
11			57	67	52	.00	.23	45	49	ENE	ENE	Fine	—	—
12			60	72	55	.23	.20	49	45	ENE	ESE	—	—	—
13			68	73	55	.19	.14	49	45	S	S	—	—	—
14			67	75	57	.03	.03	45	44	SW	SW	—	—	—
15			69	71	57	.00	29.84	44	42	SW	SW	—	—	—
16			65	67	50	29.72	.74	42	43	W	WSW	Cloudy	Show'ry	Fine
17		○	57	64	52	.75	.75	43	43	WSW	WNW	Cloudy	Cloudy	Cloudy
18			61	68	53	.79	.91	43	44	NW	NE	Cloudy	Cloudy	Cloudy
19			65	74	56	.92	.87	44	40	SE	SSW	Fine	Fine	Fine

The quantity of Rain fallen in the month of May, was 14-100ths of an inch.

NOTICES.

Communications have been received from MR. WALLER, MR. LEONARD, MR. CHENEVIX, MR. HEMING, MR. HIGGINBOTTOM, &c.

Boylan Lib.

THE LONDON
Medical and Physical Journal.

NO 366, VOL LXII.]

AUGUST, 1829.

[NO 38, *New Series.*

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long, but an invaluable series.—RUSH.

ORIGINAL PAPERS, AND CASES,
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER
AUTHENTIC SOURCES.

THE LABURNUM.

Remarks on the Poisonous Properties of the Laburnum. By
A. T. THOMSON, M.D. Professor of Materia Medica at the
London University. (In a Letter to Mr. NORTH.)

MY DEAR SIR,

IN the last Number of the London Medical and Physical Journal, a case of poisoning by the flowers of the Laburnum is detailed. This may appear strange to many who believe that the natural order Leguminosæ, to which the laburnum belongs, contains no poisonous plants, as it supplies a large proportion of the vegetable nourishment of man and other animals. The Laburnum is, nevertheless, a poisonous plant; and the active principle on which this quality depends resides both in the flowers and the seeds.

The Laburnum is a species of the genus *CYTISUS*, a family of plants belonging to the class *Diadelphia*, and the order *Decandria* of that class, in the Linnean system; and, as I have already mentioned, to the natural order *Leguminosæ* of Jussieu. According to Pliny,* the term *Cytisus* is derived from the name of an island of the Archipelago, whence the first species of the family described was procured. The *Cytisus laburnum* is a native of Helvetia; but it has long been cultivated in England as an ornamental plant: its long, pendulous racemes of bright-yellow papilionaceous flowers forming a beautiful appendage to the

* Liv. 13, c. 14.

delicate green of its ternate leaves, which are scarcely fully expanded when the blossoms are in their highest perfection, early in summer. The flowers are succeeded by long, narrow, many-seeded pods.

The vulgar have always regarded the seeds of the *Laburnum* as poisonous; and I recollect, as a boy, that I was warned against eating them. It is to MM. CHEVALLIER and LASSAIGNE that we are indebted for the knowledge of the poisonous principle of the *Laburnum*. These chemists, having analysed the seeds, procured an extract, which they named *Cytisine*, and which, on being taken into the stomach, operates as a violent emetic and purgative. A dose of five grains acts as severely as a dose of three grains of tartar emetic. M. Chevallier took eight grains, which operated in the most alarming manner; but the effects were combated successfully by means of acidulated drinks, freely administered: to use M. Chevallier's words, "par l'emploi de la limonade tartrique prise en grande quantité."

Cytisine has the appearance of an extract of a yellow colour; its taste is bitter and nauseous; it attracts moisture from the atmosphere; dissolves with difficulty in strong alcohol, very readily in weak alcohol; it is insoluble in ether, soluble in water. Its aqueous solution produces no effect on the colour of either litmus or turmeric; it is not precipitated by acetate of lead, the nitrates of silver and of mercury, the sulphates of copper and of iron, or by the hydrochlorates of barytes, lime, strontian, and tin.

These negative qualities, if they do not throw much light on the chemical nature of *cytisine*, show that it is a distinct principle; and the experience of its effects on the animal economy lead to the supposition that, like many other poisons, it may be made available as a remedial agent. As soon as the seeds are ripe, I shall order some *cytisine* to be prepared in the laboratory of materia medica of the university; and I will be most happy to enable you and my other professional friends to verify the results respecting its properties that have been obtained by the continental physicians.

As some of your readers may wish to prepare it for themselves, I subjoin the method of making it employed by MM. Chevallier and Lassaigue:

"Bruise the seeds of *laburnum*, digest them repeatedly in alcohol; and, having evaporated the tincture to the consistence of an extract, dissolve in water, filter the solution, and treat this with acetate of lead, to rid it of the

acids and colouring matter. Filter the solution. The cytisine, mixed with acetate of lead in excess, passes through the filter; separate the salt of lead by means of sulphuretted hydrogen gas, and filter. The cytisine is procured in the form of an extract by evaporating the filtered solution."

Believe me, my dear sir, yours faithfully,

ANTHONY TODD THOMSON.

3, Hinde street; 18th July, 1829.

The case to which Dr. THOMSON refers in his letter occurred in our own practice, and we confess we were not aware at the time that the *flowers* of the *Laburnum* possessed any injurious properties. We mentioned the fact to two eminent botanists, both of whom stated that *none* of the leguminous tribe of plants were poisonous. The symptoms of depression produced in the child whose case we briefly related in our last Number, page 86, they were inclined to attribute to excessive nausea from an overloaded stomach. From Dr. Thomson alone could we obtain any information upon the subject. The following extract, which we take from the *Dict. des Sciences Med.* t. xlv. p. 187, confirms the statement with which he has favored us:

"*Cytisine* exists not only in the seeds of the *cytissus laburnum*, but, as it appears, in many other leguminous plants. It has also been recently detected in the flowers of the *arnica montana*; the emetic powers of which seem to depend more upon this poisonous principle than upon the larves of insects which have been mentioned by M. LEMERCIER. *Cytisine*, given in very small doses to different animals, produces vomiting, convulsions, and death. In man, in a dose of eight grains, besides very obstinate vomiting, it has caused vertigo, powerful spasmodic contractions, elevation of the pulse, and discoloration of the face. These symptoms lasted two days, and were followed by great depression, which continued, although in a diminished degree, for upwards of a fortnight."—EDITORS.

DR. BALLINGALL'S CLINICAL LECTURE.

Review of some of the Surgical Cases which have lately occurred in the ROYAL INFIRMARY of EDINBURGH. A Clinical Lecture delivered to the Students of Surgery in that Institution, on Thursday, 26th February, 1829, by GEORGE BALLINGALL, M.D. F.R.S.E.; Fellow of the Royal College of Surgeons, Surgeon Extraordinary to the King, Regius Professor of Military Surgery in the University of Edinburgh, and one of the Surgeons to the Royal Infirmary.

(Continued from p. 32.)

AMONG the cases of secondary amputation, I would notice that of Helen Coghill, æt. twenty-one, as affording an exam-

ple of the severe sufferings occasionally experienced from inflammation of the joints, and as affording room for a single remark on the mode of amputating the thigh.

This poor girl was admitted on the 8th of October, and the following report entered on the journal :

"The left knee is swelled, hot, and painful; the patella is moveable, but the slightest motion or pressure upon this bone is attended with very severe pain in the condyles of the femur. The limb is kept constantly in the extended posture. Pulse natural; tongue clean; belly regular. States that her knee was first inflamed ten years ago, in consequence of a fall, from the effects of which she never altogether recovered. Eighteen months ago, after a similar accident, the inflammation was much aggravated, and has been more severe than ever during the last seven weeks.—*Applic. Hirud. xx. genu.*"

Subsequent to this, various remedies were employed, but without any very obvious or permanent relief, and on the 3d of November I find the following report entered in the journal :

"Took three grains of opium, and slept a little; pulse 124; tongue slightly furred; no sweating; bowels regular; appetite rather worse. Previous to her admission she had been cupped, and leeches had been applied with benefit. Since her admission she has been leeches three times, and cupped three times to a large amount, and has also had a blister applied; but the disease has certainly become worse."

Leeches were again applied, and were followed at a short interval by the use of moxas on either side of the patella; but none of these remedies seemed to check the progress of the disease. The pain was so exquisite upon any attempt to move the limb, as to preclude any satisfactory examination of the joint; her appetite failed; she was occasionally distressed with nausea and retching, and her bowels became greatly disordered. In short, her sufferings were so severe as to induce her to seek relief by the removal of the limb; but, when this was seriously proposed to her, she requested permission to consult her friends on the subject, and it was not until the 5th of December that she made up her mind to the operation, which was immediately performed. She took seventy drops of laudanum, and slept a little on the following night.

For some days after this she was harassed with nausea and occasional retching, her pulse varying from 136 to 140; but her bowels became more regular, and her general appearance improved. She was distressed with some su-

perforated ulcerations on the back, but the stump from the first assumed a very promising appearance; the greater part of it united by the first intention, and indeed I am inclined to say that, upon the whole, it healed too rapidly: that is to say, that union had taken place between the lips of the wound before the inflammation contiguous to it had sufficiently abated. In consequence of this, some small phlegmonous swellings formed and burst in the line of the cicatrix, after she left the hospital, which she did on the 3d of January.

On laying open the joint after the amputation of the limb, the disease in this poor girl's knee was found to have made very extensive ravages. The preparation, which I now again exhibit to you, shows that the cartilages covering all the bones of the joint, with the exception of that on the inner condyle of the femur, were either entirely destroyed or floating loose, being completely detached from the bones.

You would observe, gentlemen, that, in amputating this young woman's thigh, instead of forming two lateral flaps, as I had hitherto been accustomed to do, I formed an anterior and posterior flap, the one from the extensors on the fore part, and the other from the flexors on the back part of the thigh. This is a mode of operating which I first saw practised by Mr. LISTON in the cases of two boys whom he operated upon in the house last autumn; and in the case of such young subjects, who cannot readily be made to retain their stumps in a desirable position, but are constantly inclined to elevate the point of the stump, it appears to me to offer decided advantages: in the first place, it obviates the projection of the bone between the lateral flaps, which I am told has sometimes occurred; and, in the next place, you will see that, the more the point of the stump is elevated, the more are the extensor muscles relaxed, so as to afford a covering for the point of the bone. Other collateral advantages attendant upon this mode of forming the flaps are pointed out by Mr. CREASERS, formerly of the Bath Infirmary, in the twenty-second volume of the *Edinburgh Medical and Surgical Journal*; although he, indeed, recommends the flap to be formed by cutting from the surface towards the bone, instead of transfixing the limb and cutting outwards.

The plan of dressing stumps after the common circular amputation of the thigh, so as to place the line of the cicatrix transversely, instead of perpendicularly, you will find advocated both by Mr. GUTHRIE and by Mr. COPLAND

HUTCHISON; the latter of whom, in the first edition of his surgical work, gave a marginal sketch well calculated to illustrate his valuable remarks upon this point.

The only other case of amputation with which I propose to detain you at present is that of John Browne, æt. thirty-seven, a seaman, who, about twelve months previous to his admission, had been cast away in a vessel upon the coast of Norway, and had remained five days on the wreck. The circumstances under which he was admitted are as follows: "Has lost all his toes in consequence of frostbite. On the under surface of the left foot there is an extensive ulcer, which, from the very extensive destruction of the skin which has taken place, scarcely appears capable of cicatrization.

"States that his toes sloughed off during exposure to cold on the coast of Norway in November last, and that the ulcer of the left foot has never been cicatrized."

On examining accurately the state of this poor man's foot, it was obvious that no firm or permanent cicatrix was likely to be formed without sacrificing the metatarsal bones, and accordingly the following operation was determined on, which I executed on the 4th of November.

"An incision, convex anteriorly, having been made from a little beyond the base of the first metatarsal bone, to the most extreme point of the base of the fifth, a flap was formed from the integuments on the dorsum of the foot. The four outer metatarsal bones were then disarticulated, the internal cuneiform bone sawn through, and a corresponding flap formed from the integuments of the sole; the two flaps were then united by three points of the interrupted suture."

The dressings were removed on the 8th, when "the wound was found partially united; at one point the integuments had sloughed for about the extent of a shilling." Subsequent to this, he sustained a severe attack of erysipelas, which, in two or three points contiguous to the wound, terminated in the formation of matter under the skin; it assumed the erratic form over the other parts of his limb, and encroached slightly upon the trunk of his body. The cure was, upon the whole, tedious; but he ultimately obtained a good stump, and was well satisfied with the operation. He remained in hospital until the 5th of January, when a passage was procured for him to London, where he expected something to be done for him by the owners of the vessel in whose service he had been so severely mutilated.

The only circumstance worthy of notice in this operation is that, in consequence of the destruction of soft parts on the

anterior part of the sole, I was obliged to form a longer flap from the dorsum of the foot than what I think desirable. Had circumstances admitted of it, I should have preferred forming a single large flap from the sole, and turning it up over the anterior extremities of the tarsal bones; thus bringing the cicatrix up towards the dorsum of the foot, and rendering it less liable to be injured in walking.

After [these remarks upon amputation, I would now solicit your attention to a very interesting case of severe injury of the ankle, with exposure of the astragalus, and consecutive luxation of the joint; a case in which it was apprehended that amputation might have been necessary, but which ultimately did well under Dr. HUNTER's care, by the use of repeated bleedings.

Martin M'Owen, æt. nineteen, admitted 19th October.—“Situated over the fore part of the ankle is a contused wound, the size of the palm of the hand, occasioned by a loaded waggon passing over it. The astragalus is felt quite bare on the outer side. There does not appear to be any fracture. The limb was placed on M'Intyre's splint, and a poultice applied.

“October 20th.—Was bled twice during the course of yesterday. Little swelling of limb. There appeared to be a dislocation of the ankle, which was easily reduced. Slept badly. Bowels freely opened; tongue moist, pulse sixty, skin hot, no thirst.—Venæsectio ad ʒxij. Cataplasma ferment. Sol. Tart. Antim. ʒss. every hour.

“21st.—Blood buffed and cupped; some sleep; tongue clean and moist; belly open; pulse eighty-four. Skin cool; some thirst; little swelling of leg, which is looking well.—Venæsectio ad ʒxij. Sulph. Magnes. ʒi. statim. Cont. Sol. Tart. Antimon.

“25th.—Sloughs nearly all separated; pulse seventy-eight, rather sharp; belly open; tongue moist.—Venæsectio ad ʒxij. Tart. Antim. gr. ij.; Aquæ ʒviiij. M. capiat ʒi. tertiâ quâque horâ.

“26th.—Blood buffed and cupped; slept badly from pain in limb; no swelling; discharge increased, and not so healthy; belly open; tongue moist.—Venæsectio ad ʒx.

“27th.—Granulations more healthy; no pain of leg; slept well; belly open, tongue moist; pulse eighty-four.

“November 1st.—Leg looking well. Was ordered six ounces of beefsteak and a pint of porter daily; and on the 2d of January was dismissed cured.”

Amongst the cases of chronic diseases of the bones, you had two very remarkable instances of the separation of ex-

tensive portions of the cranium in two boys who were under Mr. Liston's care, during the present course. The first of these, James Thom, æt. thirteen, was admitted on the 10th of December, and stated "that, two and a half years ago, he received a blow upon the head from a stone; a swelling formed, which opened three days after the accident; and a small quantity of blood was evacuated, since which time several portions of bone have exfoliated. There is an opening immediately over the junction of the parietal bones, towards their back part; a small bridge of integument divided the opening; the matter in the sore can be distinctly seen rising and falling, corresponding with the pulsation of brain. On introducing a probe, the bone is felt bare for a considerable distance round the wound on all sides. His health has not suffered, neither has he been at any time confined to bed; no pain of head; pupils appear dilated, but are perfectly sensible; tongue white, appetite good; pulse seventy-two, somewhat irregular.

"December 14th.—An incision was made in the scalp, and the bone found extensively bare. No bad symptoms since."

On the 26th, it is stated that "a circular portion of bone was removed, to give a free exit to the matter; has had no headach; slept well; tongue clean." From this period the wound assumed a healthy aspect, the patient had no headach nor other unpleasant symptom; and about the middle of January he was dismissed, with instructions to return and show himself occasionally. Upon the last examination, the wound was cicatrizing rapidly, and the boy's general health good.

Another case, of a more serious aspect, and attended with repeated convulsive attacks, occurred in the person of Henry Lee, æt. thirteen, who was admitted on the 22d of December, and whose case is thus detailed in the journal:

"Received a blow on his head twelve months ago; a swelling formed, which was opened a few days after the accident. Had a good deal of pain in his head after the abscess was opened, and about a week after this had a fit, which was followed by a discharge of matter, and relieved the pain of the head. Has had a great number of fits, which have all been followed by a discharge of pus; has had no fit since the 17th September last. There is an opening, the size of a shilling, in the scalp, situated over the junction of the occipital bone with the parietal bones and the sagittal suture; the bone is black and bare for a considerable distance round; the discharge is thin and offensive; has

no pain of head; health and appetite good; pupil dilated, but perfectly sensible; tongue moist; pulse 104.

"There is a fistulous opening over the sternum, leading down to the bone, which is bare; an abscess formed about the same time with that on the head, and was opened. No pieces of bone have been discharged.

"December 23d.—A crucial incision was made, and a piece of bone, the whole thickness of the cranium, was found loose, and removed." Had no bad symptom after the operation. On the 27th he was ordered animal food, and a few days afterwards four ounces of wine daily. From this period his cure went on progressively, and on the 10th of January he was made an outpatient. The fistulous opening over the sternum was touched with the potential cautery previous to his leaving the house, and has since healed.

Both these cases afforded examples of the beneficial interference of art in removing large portions of the cranial bones when in a state of disease. The contrast between such cases and those of recent injury is very remarkable; for, while in the latter every experienced surgeon dreads the extensive exposure of the dura mater, yet he knows that, in cases like those I have just detailed, where the dura mater has been for some time detached from the interior of the skull, and has become covered with granulations, the carious or necrosed bone may be removed with freedom, and often with advantage: witness, amongst many other cases, the very remarkable one detailed by SAVIARD, of a woman in the Hôtel Dieu at Paris, "who underwent successive exfoliations of the cranial bones to such an extent that the pieces, when put together, resembled the skullcap as it is sawn off in dissections."

In the case of another patient of Mr. Liston's, John Alison, æt. twenty-one, who was admitted on the 27th October, an instance was seen of the successful removal of a portion of diseased bone from the os calcis, a bone of very different texture and situation. The detail of this case given in the journal is as follows:

"States that nine years ago he sprained his left ankle. There have been at different times sores formed, which healed up without any bone being discharged. Ten weeks ago received a slight injury, when it again swelled, and several abscesses formed and burst: one small piece of bone was discharged. There are three sores situated on the outer, and the same number on the internal malleolus.

On probing the sores on the outer side, the os calcis is found carious, and the probe appears to enter the joint. The bones opposite intersected on all sides by sinuses. Health and appetite good at present. Motion of the joint not impaired."

On the 3d of November, "a considerable portion of the os calcis was removed by Mr. Liston, and the cavity stuffed with lint."

Very little pain or swelling succeeded to the operation; a poultice was applied over the dressings. On the 13th, a seton was drawn through the diseased part of the foot; and on the 4th of December it was reported that "no dead piece of bone can now be felt; granulations healthy; general health good."

About the beginning of January, the sores were nearly all healed. Some soft swelling remained about the ankle, the motions of which were perfect. It was done up with plaster and bandage, in the manner recommended by Mr. Scott, of the London Hospital, and the patient dismissed.

Akin to the last-mentioned case is that of Alexander Beveridge, æt. fifteen, admitted on the 25th of November.

"States that eighteen months ago a swelling began to form over the left os calcis on the inner side. This broke, and discharged a quantity of matter. Two small pieces of bone have been discharged. There is a fistulous opening below the malleolus, leading down to the bone, which is bare; the motions of the joint are perfect; health good."

On the 28th it is reported, that "a large portion of dead bone was removed yesterday by Mr. Liston, with the assistance of the trepan; slept badly; some headach; pulse 180; skin rather hot; tongue clean; bowels open; no swelling of limb."

On the 2d of December, "dressings were removed; sore looking well; health good."

From this time forward I find nothing of any importance noted in the journal; the patient's health continued good under the use of animal food and porter, the sore granulated kindly, and on the 14th of January he was dismissed cured.

These cases, gentlemen, I have been induced to bring to your recollection, because, although they offer nothing very striking in the detail, they are well calculated, in my opinion, to encourage a more successful practice in a class of cases which have frequently been (if I may use the expression,) slurred over, and have too often been allowed to go on from bad to worse, until the patient's life has been

brought into hazard, and has perhaps been ultimately saved only at the expense of his limb.

Of the partial excision of bones in cases of carious joints, I have, during the present winter, seen some very remarkable and successful examples in the practice of Mr. SYME, which are, I believe, intended to be laid before the profession * These cases have struck me so forcibly, that I begin to be almost ashamed to look my own preparations in the face. The museum of the Royal College of Surgeons will, I am afraid, bear witness that I, as well as other surgeons, have amputated several limbs which might have been saved by the excision of the carious joints.

[To be continued.]

MIDWIFERY.

Half-yearly Report of Cases in Midwifery, which have occurred in the Northern District of the London and Southwark Midwifery Institution. By C. WALLER, Esq. Consulting Accoucheur to the above Institution, and Lecturer on Midwifery at the Medical School, 58, Aldersgate street.

1829.	No. Women delivered.	Sex of Children :		Born alive.	Stillborn.	Presentation.
		Males.	Females.			
January ..	29	14	15	26	3	{ 28 Natural 1 Face
February ..	22	12	10	21	1	Natural
March	36	17	19	35	1	{ 35 Natural 1 Placenta and Back
April	34	14	20	30	4	{ 32 Natural 1 Foot
May	34	25	9	31	3	Natural
June	27	13	14	25	2	{ 26 Natural 1 Foot
Total	182	95	87	168	14	

REMARKS.—Several of the children reported as stillborn have been premature. Nothing particular occurred, excepting in one case, where the patient was advanced a little beyond the sixth month of pregnancy. I was summoned to her in consequence of a sudden gush of blood following the discharge of the waters. On examination, I found the

* Vide "Three Cases in which the Elbow-joint was successfully excised, with some general Observations on the Treatment of Caries. By JAMES SYME, Esq. Surgeon, and Lecturer on Surgery in Edinburgh." *Edinb. Med. and Surg. Journal*, April 1829.—EDITORS.

placenta attached to rather more than one half the circumference of the os uteri. The hemorrhage, in consequence of the tonic contraction of the uterus, was exceedingly trifling: in fact, there was no more discharge than there frequently is in a natural labour. The pains just then a little flagging, but still, during their intervals, the child was closely embraced by the womb. The presentation could not be distinctly ascertained at first. After a short period the pains increased, pushing down the placenta first, and the child afterwards, which, although a presentation of the back, was expelled double with tolerable ease; the uterus all this time retaining its contraction so firmly that the bleeding did not return; which, of course, rendered it quite unnecessary manually to interfere.

In both of the footling presentations the children perished. In one, profuse hemorrhage preceded the birth of the child, which continued notwithstanding the use of cold and friction. I therefore determined upon emptying the womb, and, on examination, found the vagina filled with coagula, in the midst of which was a foot, which was secured and easily brought down; when the hemorrhage instantly ceased. In consequence of a contracted brim, some little difficulty was experienced in bringing the head through this part of the pelvis, which was, perhaps, partly the cause of the infant's death. This patient had a good getting-up, though she remained faint for some time after delivery.

In the other case the female was suddenly delivered, the body of the child being born before she sent for her medical attendant. Owing to this circumstance, the head was detained in the vagina, the circulation through the cord interrupted, and of course the infant died.

In one instance, hemorrhage to a very considerable extent occurred after the expulsion of the placenta. The patient, a young woman, *ætatis* twenty, was delivered of a very large stillborn child; after a protracted labour: the placenta was expelled naturally, but the quantity of blood lost afterwards was very great, the bed being literally soaked through. No effect, however, was produced upon this patient's constitution by it, her pulse remaining steady and her countenance unchanged.

In another case, the hemorrhage took place between the birth of the child and the expulsion of the placenta. The patient's age was twenty-three, and she had just been delivered of her third child, after a slow labour, the uterus, till just at the termination of it, acting very feebly. After the birth of the child she seemed very comfortable, and, on

placing my hand upon the abdomen, the uterus was felt pretty firm, though rather larger than usual. In a few minutes she became excessively faint, and, on examination, I found that blood was coming away in large quantities. The placenta was lying in the upper part of the vagina, and therefore, after employing cold and friction, I removed it, when the discharge abated; but there was a very considerable draining for some hours afterwards, so much as to produce repeated attacks of syncope.

In a third case, the hemorrhage occurred immediately after the birth of the placenta, the uterus remaining flabby for some time. The application of cold, with friction, at length arrested it, though not before the patient had been brought very low. The next day, on her being moved, the discharge recurred to a considerable extent. She is now suffering severely from headach and diarrhœa, the consequences of the hemorrhage.

A very firm and pretty general adhesion of the placenta occurred in one case: owing to the powerful action of the womb, no hemorrhage occurred, but the operation of extraction was by this circumstance rendered extremely difficult. The patient recovered afterwards, without an unpleasant symptom.

The face presentation happened to a patient whose pelvis was of good size, and where there was plenty of secretion, and therefore no great difficulty was experienced, although the labour was, of necessity, rendered more tedious and severe than under ordinary circumstances. The child's face was very much tumefied, but regained its natural appearance after a few days.

A fatal case of abdominal inflammation has taken place within the last six months, after a very natural labour: as, however, I did not see this patient, I cannot enter into the detail of either symptoms or treatment.

In one individual the use of the long forceps was required, in consequence of the extraordinary size of the child. This patient had been in labour for two days, though the pains were not very urgent; the liquor amnii had unfortunately been discharged at the commencement of the labour. I succeeded, with some difficulty, in delivering the head, and at this period the child was alive; but, owing to the immense breadth of the shoulders, they could not be extricated in time to preserve its life: the united efforts of Mr. Doubleday and myself were required for a considerable time before we could accomplish our object. The weight of the infant, including the flannel in which it was wrapped, was twelve

pounds eleven ounces. The female had a remarkably good getting-up.

In several instances, patients have complained of severe abdominal pains, somewhat simulating inflammation; pressure considerably aggravating their distress. The state of the countenance, the pulse, and the tongue, however, not being indicative of active inflammation, I prescribed calomel and opium, with the most marked success, in almost every case.

The induction of premature labour was required in one case, in consequence of great deformity of the pelvis. This female had been pregnant eleven times previously; she had three times been allowed to proceed to the full period, and each time it was found necessary to open the child's head; the remaining eight times, labour had been brought on at the seventh month, but none of the children survived long. I this time punctured the membranes on the 8th of June; on the 10th, slight labour pains commenced; and on the 11th, early in the morning, the fœtus was expelled. This patient had been deceived in her reckoning; for, although she stated herself to have completed the seventh month, it was evidently not more than a six months' child. The fœtus was born living, but it never breathed.

Several interesting cases of false pains have occurred: in one female they were very violent, and resisted every means employed for their relief, so that I considered myself justified in rupturing the membranes, and thus hastening the parturient process, the parts of generation appearing to be well disposed for labour.

A considerable tumor formed on the head of one child, at the junction of the occipital with the parietal bone. According to the opinion of the late Dr. BAILLIE, these tumors are produced by extravasated blood, in consequence of one or more of the vessels of the scalp being lacerated at the time of the passage of the child's head. I have twice had an opportunity of seeing the contents of these swellings, and I found (as far as I could judge from these two cases,) that Dr. B.'s opinion was correct. They require little or no treatment. I usually order a Liq. Ammon. acet. lotion, with a view of increasing the process of absorption; but am by no means prepared to assert, that they would not disappear as soon without it.

93, Bartholomew Close; July 1829.

SCIRRHOUS OVARIA.

Cases of Scirrhus Ovaria. By Mr. J. LEONARD, Surgeon.

CASES of diseased ovaria are by no means of rare occurrence, and there is little in the detail of the majority of them interesting to the practitioner: they are generally well defined, and readily distinguishable from diseases affecting the other pelvic viscera; the cases running the same course, and terminating sooner or later fatally. Occasionally, however, we meet with a case worthy of selection, and such a one is the first of the two I shall narrate: it is remarkable for the rapidity of its progress, the size it attained, and from its being unaccompanied by those symptoms of debility, which are rarely absent whenever organic disease exists. Perhaps the age of the patient, being in the prime of life, and the short time she was a sufferer, account for the latter circumstance. The other case, although the diseased ovary was of considerable size, is not very remarkable.

CASE I.—Mrs. S, aged thirty-five, was delivered of a child fifteen months ago. The labour was protracted; the appearance of the abdomen had been remarked, during the progress of gestation, as being very unusual. The enlargement of the uterus with its contents went on naturally; but on the left side of the uterus was a tumor, about the size of a child's head at the time of birth. After the removal of the placenta, the contracted uterus was perceptible through the parietes of the abdomen, rather less than the tumor, which retained the same relative position, and was as firm to the touch. Her recovery was tedious; but, during the period of lactation, which continued seven months, her health was good, and she felt no inconvenience from the tumor, except a pain in the lumbar region occasionally, which readily went off. Soon after the infant was weaned, the pain in the lumbar region became more severe, and descended to the os sacrum. She described the pain as striking through to the left side of the lower part of the abdomen, down the thigh in the direction of the crural nerve, to the inner condyle of the os femoris, and up to the umbilicus. The tumor now seemed to occupy a more central situation in the abdomen, which had the appearance of pregnancy in the seventh month: (this was four months before her death.) There was no return of catamenia, nor any appearance of uterine discharge, till near the fatal termination of the disease. She was now much troubled with symptoms of uterine irritation, as sickness and vomit-

ing, pain in the breasts, with reappearance of milk. The bowels were obliged to be regulated with mild laxatives.

In the early stage of the tumor, she had been ordered to take a combination of Pil. Hydrarg. and Antimon. Tart. as an alternative; but, not being attended with beneficial results, and having been pushed as far as circumstances would permit, it was discontinued. Venesection and leeches were frequently had recourse to, as the pressure on the large vessels occasioned a great determination of blood to the head; and two large caustic issues were opened in the lumbar region, and *cicuta* was prescribed. Nothing, however, had the least effect in checking the progress of the tumor: it continued to increase; the fits of sharp lancinating pain became more frequent, and lasted longer, accompanied with strong bearing-down pains, similar to labour, which were moderated by opiates. The functions of the bladder gradually became affected by the pressure, so that the male catheter was often required. Her size was much greater than that of a woman at the period of parturition; the integuments of the abdomen were extremely tense, and shining with patches of dark-coloured inflammation, threatening gangrene; and the pressure on the diaphragm impeded respiration.

She expired after a severe paroxysm of difficult respiration and vomiting, which lasted five days.

With four medical friends, I inspected the body twenty-four hours after death. The parietes of the abdomen were extremely thin, and the ensiform cartilage, and the cartilages of the lower ribs, were pushed out by the tumor, a small portion of the upper part of which was covered by the omentum. It proved to be the left ovarium, covered by its peritoneum: it was smooth and shining. Upon being cut into, it was found to be traversed by ligamentous bands, almost as hard as cartilage; the centre was rather softer; its artery was larger than the common iliac. It weighed sixteen pounds five ounces avoirdupois. The jejunum and ileum were pressed into the spaces on each side of the spine, and the liver was very small. The stomach was more vascular than common. The gall-bladder was completely filled with concretions, to the astonishing number of 108, one of which is as large as a nutmeg. These I have preserved. The other viscera were healthy, and there was very little appearance of œdema or serum in the cavity of the abdomen.

CASE II.—Mrs. H., aged sixty-two, had complained of difficulty of breathing for a considerable time. Her belly

was tumid, and fluctuation was evident. On the left side it was harder than on the right, and, upon pressure, a hard, irregular, knotty tumor was perceptible. Her legs were œdematous. As far as I could learn, the history of her case is shortly this: She had complained for years (perhaps sixteen or eighteen, to the best of her recollection,) of a very intense pain referred to the sacrum, shooting through to the pubis; latterly her stomach had been very irritable and her bowels irregular; and, about two months previous to the time I saw her, she first remarked the swelling of the abdomen, and that the secretion of urine was diminished.

Finding her in a state of extreme debility, and feeling satisfied that the ascites was only symptomatic of diseased ovarium, I gave an unfavorable prognosis. At the urgent desire of the sufferer, I drew off a quantity of fluid by tapping, which relieved the feeling of suffocation under which she laboured. She gradually sunk, and in ten days expired.

The left ovary was diseased in this case also. The tumor was of the true scirrhus character, irregular on its surface, intersected internally by ligamentous bands, and softer towards the centre, where a small irregular cavity contained about a teaspoonful of fetid sanies. It weighed four pounds two ounces. The right lobe of the liver was scirrhus in several places; and in the aorta were several patches of ossification.

6, St. Martin's street, Leicester square.

MORPHINE.

Experiments showing the Effects of Morphine and its Acetate upon Persons in Health. By Dr. BERAUDI, of Turin. (*Annali Univ. di Med.*)

AMONG the numerous experiments which have been lately made for the purpose of determining the therapeutic or the injurious effects arising from morphine and the acetate of morphine, but few trials have been made upon persons in health, to show with precision the phenomena which would be produced by the exclusive influence of this preparation of opium. In order to elucidate this important question, Dr. Beraudi, and MM. Rebuni, Crispo, and Allinio, tried a series of experiments upon themselves. M. Manfredi prepared the acetate of morphine with much care, and assured himself that the salt obtained was not a subacetate.

First series of Experiments.

The above gentlemen assembled after dinner.

1. At three o'clock precisely, M. Allinio, ætat. twenty-
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two, of a bilious temperament, pulse sixty-six, swallowed one eighth of a grain of the acetate of morphine in two ounces of distilled water. He had scarcely swallowed the liquid, when he had a bitter and rather acrid taste in the fauces. In five minutes, great pain in the epigastric region, disposition to sleep, with difficult respiration. In thirty minutes, an abundant sweat broke out over the whole body, pupils much dilated, pulse ninety-four. Thirty-three minutes, drowsiness and pain in the forehead. Fifty minutes, lips livid, face flushed, conjunctivæ turgid, darting pain in the forehead. Fifty-two minutes, pain in the region of the bladder; stupidity of countenance, but the eyes very brilliant; excessive thirst, and great feeling of lassitude in the legs. At a quarter-past four o'clock, M. A. felt itching of the skin, constant pain in the genito-urinary organs, and particularly in the right spermatic cord; heaviness of the forehead. These symptoms continued till near seven o'clock: at that time there were great pain in the epigastrium, nausea, and inclination to vomit. He did not sleep till half-past two in the morning, and during the interval he had been much agitated, and tormented by acute pain in the head and in the umbilical region. From that hour till half-past six A.M. he slept profoundly. He then awoke with a dull sensation in the forehead, and shortly after he had evacuations from the bowels.

2d. M. Crispo, æt. twenty-one, of a sanguine and bilious temperament, pulse sixty, also took, at three o'clock P.M., in two ounces of distilled water, one sixth of a grain of the acetate of morphine. Immediately after, he had an excessively bitter taste. In four minutes, nausea. In twenty minutes, stupor, dilated pupils, borborygmus, pulse seventy-nine. Fifty minutes, cheeks of a circumscribed red colour, stupid appearance, eyes brilliant, cold sweat over the body, heaviness of the head, and disposition to sleep. Four o'clock: nausea, followed by drowsiness, terminated by a more abundant and general sweat. Half-past five: pain in the bladder, slight diarrhœa, pain in the epigastrium. Tranquil sleep throughout the night.

3. M. Rebuni, æt. nineteen, of a sanguine temperament and robust constitution, took, at three P.M., one eighth of a grain of acetate of morphine, in two ounces of distilled water. Pulse sixty-three. With the exception of an acceleration of the pulse, which was raised to 108 in half an hour, and a slight redness of the edges and tip of the tongue, this young man experienced no particular effects.

4. At three P.M., Dr. Beraudi swallowed, in two ounces

of distilled water, half a grain of the acetate of morphine. Before the experiment his pulse was sixty-five. Immediately he felt a very bitter taste, followed by a painful sensation at the epigastrium, which extended to the bladder. In five minutes, an abundant and general sweat. Fifteen minutes, nausea, difficult breathing, heaviness, pale tongue, pulse sixty-six and undulating. Thirty minutes: pupils much dilated, pain in the occiput, with weight over the eyes, conjunctivæ injected. Thirty-five minutes: insupportable pain on the right side of the head, restlessness, face flushed, (in health the countenance was pale :) sweat dropped from the face; stupid and downcast air, itching of the skin. Four o'clock: violent headach, face almost livid; in a few minutes, agitated and frequently interrupted sleep for three hours. On awaking, great pain at the epigastrium and bladder, urine limpid, and voided in very small quantities, although there was great desire to make water. Dr. Beraudi got up, and, upon walking, felt continued nausea. The pain in the epigastrium soon ceased, and was felt in the umbilical region; some food was then taken, after which the pain in the epigastrium immediately returned with greater severity. Ten in the evening: diarrhœa, with shooting pains in the region of the stomach, umbilicus, and bladder, by which all repose was banished for the night; skin very dry, and the itching insupportable. The diarrhœa continued all the following morning, and ceased, with the other symptoms, at noon.

The uneasiness experienced by Dr. Beraudi and M. Allinio prevented them from continuing their experiments until the next day.

Second series of Experiments.

On the 10th of September, at eight o'clock, the experiments were continued; each was made fasting.

1st. At the above time, M. Allinio swallowed a quarter of a grain of acetate of morphine, in an ounce of distilled water. Pulse sixty-six. He experienced a bitter taste, and in twenty minutes the end of the tongue was extremely red, and the pupils dilated. In about half an hour, acute pain in the forehead, burning heat of the skin, pulse eighty, extreme lassitude of the limbs. About nine o'clock, face animated, lips livid, excessive thirst, some efforts to vomit, which soon disappeared. After this nothing remarkable occurred, and the various symptoms gradually disappeared.

2d. At eight o'clock M. Rebuni also took a quarter of a grain of acetate of morphine. The liquid appeared to him

excessively bitter. Tongue became rather red, but no other particular phenomenon was presented; while his colleagues experienced a general weariness all day.

3d. At the same hour M. Crispo took a third of a grain of acetate of morphine, in two ounces of distilled water. Pulse sixty-five. Immediately after, a strong bitter taste and slight pain in the epigastrium; in five minutes, a burning sensation in the back of the throat; and, in fifteen minutes later, a decided redness of the end and sides of the tongue, with dilatation of the pupils. Twenty-five minutes, extreme weariness of the limbs, the back, the neck, and shortly after of all the joints; pulse sixty-eight, and very irregular; conjunctivæ injected, face much flushed, lips pale; no disturbance in the cerebral functions, and the ordinary state of health was soon restored. During the night, however, the dilatation of the pupils continued, even when he looked directly at the sun. The next morning, there was an eruption on the surface of the body.

4th. At eight in the morning, Dr. Beraudi, in his turn, took two thirds of a grain of the acetate of morphine, in two ounces of distilled water. The liquid was very bitter. Immediately after, pain in the epigastrium and on the right side of the head; pupils very much dilated, although opposed to the sun; pulse rose from sixty-one to eighty-six; nausea, efforts at vomiting, extreme weariness in the joints, conjunctivæ injected, lips pale, eyes sparkling, dull pain in the frontal region, particularly the right. Ten o'clock: heavy sleep, cheeks flushed, end and sides of tongue red, violet coloured in the centre; at the same time a painful sensation, difficult to describe, was felt in the region of the stomach, the umbilicus, and bladder, with a feverish pulse. At eleven o'clock, some greenish matter was vomited; Dr. Beraudi then got up, and walked about. All the symptoms disappeared in the course of the day.

It is worthy of remark, that each of these individuals, the next morning, felt a sensation of pain and obstruction in the back part of the throat, without any unusual redness being perceived in that region.

Third series of Experiments.

On the 11th of October, at half-past eight in the morning, Messrs. Allinio, Crispo, Rebuni, Sella, and Dr. Beraudi, recommenced their experiments, fasting.

1st. M. Allinio then took a grain of the acetate of morphine, in a sufficient quantity of distilled water: a painful sensation in the epigastrium was almost immediately

felt, and in a moment dilatation of the pupils; the eyes appeared, as it were, leaping from the orbits; face red, lips pale, the point of the tongue red, the roof of the palate of a scarlet red, and rather painful. Nine o'clock: violent headach; pulse, at first sixty-eight, was then seventy-eight. Pain in the epigastrium increasing progressively, with a strong sensation of heaviness in the frontal region, followed by disturbed sleep; face moist with sweat, pulse eighty-eight. At eleven o'clock, awoke; pain in the forehead, epigastrium, and bladder, but, above all, a strong feeling of general fatigue and dull pains in the joints. This state remained till dinner-time, when M. Allinio ate with some little appetite, but nausea soon came on, and a desire to vomit. He had a good night, and on the morrow was attacked with slight diarrhœa. The next morning, about half-past eight, violent pain was felt in the front of the right side, with a cold and copious sweat along the back; two fainting fits; pupils excessively dilated; tongue pale, mouth clammy and bitter. The latter symptoms disappeared during the day, after two very painful evacuations.

It should be observed, that the constipation remained the whole of the day on which the acetate of morphine was taken.

2d. The same day, at half-past eight in the morning, M. Crispo swallowed half a grain of the acetate of morphine, in a little lukewarm alcohol. Hitherto the pulse had been at eighty-four. A very bitter taste was soon experienced; in a quarter of an hour, efforts at vomiting; in half an hour, extreme dilatation of the pupils: the pulse then ninety-four. Ten o'clock: face flushed, sensation of an appetite, which was soon appeased. Dinner-time: M. Crispo again ate a little. Contrary to custom, he immediately experienced a strong desire to sleep, and slumbered until five o'clock: awoke with headach in the forehead, acute and shooting pain in the umbilical region, which lasted till night. The next morning, in health, but the face and a great part of the body was covered with pimples.

3d. M. Rebuni, fasting, took, at half-past eight, half a grain of morphine, in a little alcohol. Pulse sixty-six. In half an hour, pupils dilated, pulse eighty-two; at ten o'clock, pulse ninety. With the exception of some slight pains in the epigastrium and abdomen, no symptoms arose worthy of notice.

4th. M. Sella, who had hitherto been a mere observer, wished in his turn to make an experiment upon himself. At nine o'clock, he took half a grain of morphine: he had

breakfasted half an hour. He immediately felt a very bitter taste, and the face became much flushed. Half-past nine, pulse sixty-four, appetite, with great pain in the epigastrium, followed by pain in the umbilical region. Soon after, a very painful sensation in the loins; and, towards four o'clock, hiccough, which lasted three quarters of an hour; after which, extreme weakness, followed by heat and excessive itching over the whole body. Health was soon restored.

5th. On the same day and hour, Dr. Beraudi took a grain of morphine, in a sufficient quantity of alcohol. The liquid had a very bitter taste. The pulse, before the experiment, sixty, in less than half an hour rose to eighty. Dr. B. took a little chocolate. Ten o'clock: pain in the epigastrium, face flushed, eyes bloodshot, tongue rather red, headach, followed by calm sleep, which lasted till eleven o'clock. Nausea then came on, with slight vomiting. If, by the red tint it produces, nitric acid will discover morphine, it is certain there was morphine in what was vomited. This sickness did not prevent Dr. Beraudi taking food at dinner-time, but, soon after a light meal, headach, with intense pain in the epigastrium, obliged him to go to bed. Profound sleep until half-past eight in the evening. During the night, disturbed sleep, with fever, headach, continual itching of the skin, very copious diarrhœa, which continued next day. For three days, pain in the stomach was almost constantly felt.

The decided uneasiness produced by the above-mentioned doses prevented the experimenters from taking the morphine and its acetate in larger doses.

These experiments do not support the opinion of M. BALLY, according to whom morphine produces no effect upon either the mouth, pharynx, or tongue. They confirm the experiments made by M. CHEVALLIER upon himself.*

MESMERISM.

Experiments and Observations on Mesmerism. By RICHARD CHENEVIN, Esq. F.R. and E.S., M.R.I.A., &c. (3d Article.)

THE opinion of many who have devoted themselves to the study and practice of mesmerism is, that this art should be wholly confined to the benevolent end of curing diseases. This maxim is no doubt founded on charity, but it is satisfactory only as far as therapeutics are concerned; and more

* *Revue Med.* Fev. 1824.

than one great province of mesmerism would lie uncultivated, were it strictly adhered to.

Mesmeric phenomena, in the present state of our knowledge, may be classed under three heads: pathological, physiological, and psychological. Humanity, perhaps, in its limited sense of individual good, might demand no more than an acquaintance with the former; but a wider spirit of advantage, that which makes men feel that the researches of philosophy are of higher import than the alleviation of many a malady, will desire investigations conducted upon other principles, and directed to every ramification into which this old, but oft rejected, truth can branch out. It is fortunate that, in pursuing the subject with a view to immediate utility, its other departments cannot be entirely neglected; and, in the hands of those who consider it merely pathologically, other phenomena start into notice, and claim attention when they are least expected.

Of all these phenomena, the most worthy of consideration are those denominated psychological. They are also the most rare, and, as far as my observation reaches, they are not strikingly manifest in more than three or four cases out of a hundred. They consist in a peculiar state of the mental faculties; and to it the name of lucidity has been applied. As, in the present article, no allusion will be made to any of these, it is useless to describe them here. Persons who desire more ample information may obtain it by consulting the foreign works, (for I am sorry to say there are none in English that treat of this subject,) and of which an enumeration was made in a preceding article.

Physiological phenomena are of much more frequent occurrence. They consist principally in a peculiar state of the nervous system, without reference either to the state of the mind or to the cure of diseases. They manifest themselves in mesmeric sleep, in particular sensations excited or allayed in the patient, by the action of the operator; in the suspension or the promotion of certain functions of animal life, whether voluntary or involuntary; certain modifications of the senses, contrary to what are admitted as the usual laws of nature, and produced entirely by the mesmeric influence. These are the most common results of mesmerism; and so frequent, indeed, that it may be questioned whether two animated bodies ever can come within certain limits without producing some of them, provided the nervous system of the one be but actively directed toward the other. These effects, it is true, may not be perceptible

unless the nervous systems of both parties are suitably disposed; but they are not the less real on that account. As well might we say that the innumerable hosts of stars, discovered by later instruments, were created on the very day when Herschel first beheld them, as deny the existence of phenomena when so minute as to elude our senses, though we acknowledge their reality when they appear before us in more palpable forms.

To produce these phenomena, to make them evident to all who are attached to scientific truth, appears to me as legitimate a pursuit as any within the domain of physiology, provided it be held subordinate to the rules which should guide all similar researches, and the first of which is, that no experiment should be attempted if attended with unnecessary pain or danger. Since I began to occupy myself seriously upon the subject, not a single accident has occurred to me: neither is it probable that any will occur to operators who do not venture imprudently.

These observations were necessary, because much of what is to be stated in this article relates to the physiological class of mesmeric phenomena. Being desirous to prove by experiment that an assertion made in my first communication upon this subject is founded on fact, "*Mesmerism is true!*" I sought for an opportunity to put the science to the test, in some of the many hospitals with which this city abounds. By the kindness of Dr. WHYMPER, surgeon-major to the Coldstream regiment of Guards, and of Mr. G. SMITH, surgeon to the same regiment, the first trial was made in their establishment; and an account of these experiments shall fill the following pages.

My short stay in London did not permit me to undertake any patient in the absolute hope of effecting a cure. Neither could I expect, in so short a time, to spread conviction very far. All my ambition was to excite curiosity; to break the ice of public incredulity; to turn the attention of a few of my eminent countrymen to a subject, of which so many distinguished foreigners have long admitted the truth. The most rapid phenomena, those which manifest themselves in the shortest time, were the most likely to conduce to this purpose; and with this intention the following experiments were undertaken.

The mode of proceeding was constantly as follows: Dr. Whympier and Mr. Smith examined their list of sick, and called into the room whomsoever they pleased. I had no communication whatever with the patient submitted to experiment but in their presence; and it very rarely hap-

pened that I uttered one single word to any of them previously to the operation, or while it lasted. The minds of all were entirely unprepared, at least until the process had become a subject of conversation among the inmates of the hospital; and then their opinions must have taken their bias from effects already produced, that is to say, from mesmerism.

April 12th.—Mr. Smith only was present this day, Dr. Whympers being occupied elsewhere. *Serjeant Oakley*: mesmerised him twenty minutes; no sensible effect: tried him no more.

Case of Richard Ireland.

April 12th. Mr. Smith alone present.—In two minutes' mesmerization, Ireland's eyes began to water, and his left nostril to run. His eyelids trembled very much. In six minutes I saw he was asleep. I then raised his arm almost as high as his head, and let it suddenly fall: he did not waken. When he had slept twenty-five minutes, I attempted to waken him by transverse passes made in that intention. He remained asleep, however, until I called him by name.

Second; April 14th. Dr. Whympers and Mr. Smith present.—In about five minutes he was asleep, and remained motionless for thirty minutes; at the expiration of which, I called him by name, and he awoke. Questioned by Dr. Whympers, he said he had slept soundly.

Third.—Ireland having been thus put to sleep by my mesmeric action, and in a manner which left little doubt upon the minds of Dr. W. and Mr. S., I was anxious to prove to these gentlemen a truth, which is one of the most important features of the doctrine, viz. that the faculty of mesmerising is not a peculiar gift, confined to a few "*quos equus amavit Jupiter*," but a power diffused as equally as any other power over the whole species. Serjeant Bradbury, who for nine years has superintended the pharmaceutic department of the hospital, was called in. I showed him the mode of operating, and gave him the necessary instructions, (which preliminaries may have occupied two minutes,) and he then proceeded to act. In six minutes Ireland was fast asleep. While he was in that state, I desired Serjeant Bradbury to raise his (the patient's) arm, nearly as high as his head, and let it suddenly fall. He did so: Ireland remained fast asleep. Bradbury, by my direction, attempted to waken him by transverse passes, but in vain. His name was then called, and he awoke. Questioned by Dr. Whympers, he said he was not aware that his arms had

been raised or touched; that he had slept soundly, but had not been in the chair more than ten minutes.

Fourth; April 17th. Dr. W. and Mr. S. present.—Bradbury put him to sleep in five minutes very soundly. He remained motionless for twenty-five minutes, and was then awakened. Questioned by Dr. Whympier, he said he felt his health better, that he coughed less; did not know why he slept; was never in the habit of sleeping during the day, but supposed that the hands passing before his eyes, and the quiet of the room, set him to sleep.

Fifth; April 18th. Dr. W. and Mr. S. present. Mr. NORTH was also present this day.—Bradbury put him to sleep in three minutes, and very soundly. He slept until Mr. North raised his arm, and let it fall suddenly. It is here necessary to state, that no person should be permitted to touch the patient while asleep, except the mesmeriser; the most dangerous consequences might ensue; but, as this man was not particularly sensitive, and as the gentlemen present were anxious to make some trials of their own, I consented, in order to satisfy them; warning them, at the same time, that such experiments should not be repeated.

Sixth; April 21st.—He was mesmerised by Bradbury, I not being present this day. A person, who witnessed this day's sitting, told Ireland to try to resist sleep. He did so, and succeeded; but his eyes and nose watered much, and the inclination to sleep was very great. He said that, had he shut his eyes one moment, he must have slept.

Seventh; April 22d. Dr. W. and Mr. S., with two private gentlemen, were present. Bradbury put him to sleep in six minutes, he being told not to resist. At the end of twenty minutes I woke him, by making transverse passes with that intention.

Eighth; April 23d. Dr. W. and Mr. S. present.—Bradbury mesmerised him for twenty minutes; but, as he said that he came into the room fully determined to resist, he did not sleep. His health was not improving, and no more experiments were attempted on this man.

The third patient tried here was *Garrand*, of the band of the regiment.

First; April 15th.—He did not sleep, though mesmerised thirty minutes, and said he was not aware of any effect upon him. I then tried the following experiment: Having previously announced to Dr. W. and Mr. S., out of the reach of the patient's hearing, that my intention was to communicate to Garrand's hand a sensation of heat or of

cold, according to my will, without giving him any intimation of that will. I touched his hand with a silver pencil-case, with that intention. The results of the six first experiments were perfectly correct: that is to say, he felt the pencil-case cold when I willed that he should feel it cold, and hot when I willed that he should feel it hot, without committing a single mistake; but, when the experiment was often repeated, he began to err, and his sensations ceased to be according to my will. I must here state, that I have made this and similar experiments, with more or less success, at least upon eighty patients; and that I have always found that, when I repeated them too frequently at the same sitting, the tact of the patient, however accurate in the first trials, became as it were bewildered, and no longer distinguished the sensations according to my will. These anomalies have been observed by every practical mesmeriser, and are still more striking in the class of phenomena which I have above designated psychological. How to account for them, or for any of the effects of mesmerism, I know not; but such deviations from regularity are not uncommon in physiology. When we take successively into our mouths two known liquors, of different flavors, we immediately recognize them: when we repeat the trial too often, they are no longer distinguishable.

The following experiment was now performed: Garrand's eyes were most strictly blinded; he was desired to raise both his arms, and, being asked whether he felt any thing in either of them, he answered "No." A piece of paper, weighing perhaps from one to two grains, was placed upon his right sleeve, in such a manner that it was utterly impossible for him to feel it. He was then desired to raise both his arms, and was asked "Do you feel any thing?" "Yes." "What?" "A stiffness and weight in my right arm."

The same experiment was tried upon his feet, and with similar success, until too often repeated. Trial was then made whether he felt weight or stiffness in any of his limbs when the paper had been taken off without his knowing it: he felt none.

Second; April 16th.—He did not sleep, and evidently struggled much to avoid sleeping. His eyes, however, were so closed that, although he made many efforts to open them, he could not. He had a violent pain in his forehead, which some passes, made with an intention to relieve it, soon dissipated. The experiment of the pencil-case, tried by Dr. Whympers himself, succeeded as yesterday. That of the paper was not so satisfactory.

Had my intention been to follow up the treatment of this patient, and to attempt a further development of his mesmeric susceptibility, I should have kept him entirely under my own guidance; but, my object being to produce some prompt and striking result, the best method appeared to me to request Dr. Whymper to substitute his will and action in place of mine; for in this case he must be perfectly secure against collusion.

Third; April 17th.—Mesmerised him twenty minutes, but did not try any further experiments on him.

Fourth; April 18th. Dr. W. and Mr. S. present; Mr. North also present.—No sleep, but his eyelids were so much affected that he was two minutes at least struggling in vain to open them. After I had secretly announced to the gentlemen present that my intention was to make his limbs stiff and heavy by my action, I did so. It was acknowledged that this man could not have the slightest notion of what my intention was; consequently, that his mind could have no share in the effect. I then made a few transverse passes with an intention to set his limbs free, and they were free. The success of these experiments, upon frequent repetition, was not constant, and for reasons already stated; but the general result was acknowledged to be very extraordinary. I asked Mr. North, "Do you think these effects real?" "Yes." "Do you think they proceed from my action on this man?" "I can see no other cause."

Fifth; April 22d. Dr. W. and Mr. S., with two private gentlemen, present.—No sleep; was but slightly affected by the experiments above stated of the paper and the pencil-case. I fear they had been too frequently repeated the day before. I then said to the gentlemen present, (of course, without a possibility of being overheard by the patient,) "I will try to fix this man in his chair." I mesmerised him with that intention for about three minutes, and then said, in my usual tone of voice, "That will do for today; you may go." He rose from his chair like a man labouring under severe lumbago, and with considerable difficulty. Questioned by Dr. Whymper as to what prevented him from rising from his chair, he said, "My back and thighs are so stiff!" I then demesmerised him for about one minute, and he said the pains were gone; he added, "I felt as if a weight had been pulling me down."

The fourth patient was named *Simpson*. When he entered the room, Dr. Whymper asked him what he expected from the operation? he replied that he did not know, but

that the other men said it numbed their blood. He was, to all appearance, asleep in ten minutes, with his head reclining backwards. After thirty minutes, he was asked how he felt? "Very odd; but I have not been asleep." "What do you mean by very odd." "The gentleman's hands seem to go through my flesh."

The fifth patient was *Mrs. Whitaker*, a soldier's wife; native of Bruxelles; very nervous, headaches, earachs, noises in her head. Dr. W. and Mr. S. present. She was so much alarmed at the idea of the operation, that she could hardly be calmed. Mesmerised her thirty minutes: no sleep. She said, however, of her own accord, that she had felt drowsy, and indeed that she had been nearly asleep three times, but was too much frightened to allow a fair result."

Second; April 18th. Dr. W. and Mr. S. present; Mr. North also present.—She was mesmerised about twenty minutes: appeared exhausted and sleepy during the operation, and said that she had been asleep. When she rose from the chair, she was reeling and tottering from side to side, and supporting herself upon every piece of furniture within her reach. She complained of great giddiness. A few transverse passes, made with an intent to demesmerise her, removed these sensations in less than half a minute. I then put the following questions to Mr. North: "Are not these phenomena extraordinary?" "They are." "Do you think they result from my action upon this woman?" "I do."* The other gentlemen, who had now become a little familiarised with mesmerism, were still more convinced of the reality of the effects which they saw.

When this woman was desired to sit again the next day, she objected, saying that it made her giddy, and confused and drowsy for the whole day, and that her child (she was pregnant) moved violently. She was evidently very nervous, and her imagination was much excited. She said, however, that the rheumatic pains of her head and face were much relieved.

The sixth patient was *Richard Gould*. April 22d. Dr. W., Mr. S., and two private gentlemen, present.—His complaint was rheumatism in the right thigh; he was

* It was not my intention to express my belief that the "transverse passes" removed the sensations of which the woman complained. I have no doubt she would have quickly and completely recovered from the sensations Mr. Chenevix describes, without any attempts to "demesmerise her." She had been, in fact, in a state very nearly resembling sound and natural sleep, and a few moments were required before she could regain her self-possession.—J. N.

selected promiscuously from a long list of patients. He slept in about three minutes, and remained motionless for half an hour. His arms were raised, as in the case of Ireland, and then let to fall, without any consciousness on his part. Transverse passes were made before his face, with an intention of wakening him, and in one minute he awoke. Questioned by Dr. Whymper, he answered that he did not know that his arm had been raised, or that any thing had been done to him; said that he felt his right thigh warmer than the other. He was not sensible to heat or cold produced by the contact of the pencil-case. A piece of paper placed upon his sleeve, as in experiments above related, gave him a sensation of weight and stiffness in the arm on which it rested; and he once complained of pain at the insertion of the deltoid muscle. He said, also, that his eyelids felt heavy and numb. A few transverse passes were then made, after which he declared that he felt quite recovered.

Second; April 23d. Dr. W. and Mr. S. present.—He was soundly asleep in one minute and a half. His arms were raised and let fall, without his knowing it. In twenty minutes, I woke him by transverse passes made before his face. I then put him to sleep again, and proposed to Dr. W. and Mr. S. to try upon him an experiment which is one of the most striking that can be performed upon patients who are affected by somnolency alone, without manifesting any other phenomenon. It is as follows: A patient being in complete sleep, the mesmeriser, without his knowledge, goes behind him, and there, at a given moment, makes transverse passes with an intention to awaken him. In such circumstances there can be no collusion between the operator and the operatee; neither can the imagination of the latter be anywise suspected of producing the result. It is an experiment which I have repeated before witnesses upon a great number of subjects, and very frequently, but which succeeds only upon persons endowed with great mesmeric susceptibility. In the present case the experiment was thus made: Having announced my intention to Dr. W. and Mr. S., without the possibility of Goold's being apprised of it, I took my station behind his chair. I then waited a couple of minutes, when I began to operate. At the very first pass his eyelids fluttered, and in about one minute he sat up erect in his chair. He soon became entirely awake, and in the same state as that in which he had been put by the previous operation.

Third; April 24th. Dr. W. and Mr. S. present.—Goold

came into the room today evidently determined to resist, and twenty-two minutes elapsed before I could produce any effect upon him; neither should I have done so then, had I not told him that I was aware of his intention. His sleep, too, was not sound; and I regretted most particularly that I was thus prevented from fairly repeating the experiment of yesterday. My wish was to awaken this man again to-day by transverse passes made behind his back; but no sooner had I ceased to mesmerise him before his face, than he awoke. I mention the experiment of yesterday, then, more as one of which I myself am entirely convinced, than as one to the validity of which the medical gentlemen, who witnessed it but once, can give their full assent.

The seventh subject was *J. Fuller*, suffering from chronic dysentery. April 15th; Dr. W. and Mr. S. present. He was taking a grain and a half of opium daily.—No sleep, but felt his head unusually light and giddy; felt very comfortable. He was not sensible of any effect produced either by the pencil-case or the paper. He sat constantly with his eyes closed, and, when desired to open them, he was full two minutes before he could do so. When asked, "What prevented you from opening your eyes?" "I could not; they were fast closed; there was no strength in my eyelids; I never felt so before in my life."

This man was mesmerised again the next day, but only for a few minutes, and without any remarkable effect.

In a preceding article inserted in this Journal, it was stated that about one person in six was susceptible of mesmeric sleep; but, sleep not being the only effect, a larger proportion than this may manifest some of the phenomena. In fact, to eyes accustomed to observe the results of mesmerism, more than half of the subjects submitted to experiment show a certain susceptibility, in some shape or another. But, in the present state of the science, it would be unfair to obtrude upon novices the questionable phenomena which inexperience may hesitate to acknowledge, however evident to old practitioners. In every art tyros fail to discern the delicate touches on which their satisfaction is afterwards founded. For this reason I forbear to insist upon any results which did not afford entire conviction to the medical gentlemen who beheld them for the first time.

Seven patients, then, were mesmerised at the Coldstream Guards' hospital; three of whom, Ireland, Goold, and Mrs. Whitaker, slept. Every one of the seven, Oakley alone excepted, exhibited phenomena which no mesmeriser could for a moment mistake; which even struck Dr. W. and Mr. S.

as most extraordinary, and for a large portion of which it is impossible to account upon any known principle. A single example is sufficient to establish a general mode of reasoning upon all. Garrand, for instance, did not sleep, but he was susceptible of other sensations, as in the experiments of the pencil-case and of the paper, and when he was nearly rendered incapable of rising from his chair. Had this man been inclined to deceive us, the only effect of which he could have heard when first I mesmerised him, was sleep. This, then, was what he would have counterfeited, for he knew of no other; but he did not do so. The first time I touched his hand with the pencil-case, he had no more idea of what my intention was than if he had never seen me; yet the sensation which he described not only was one of temperature, and never of any other physical quality, as weight, hardness, &c., but it most accurately corresponded with the variations of heat and cold which, without his knowledge, I had announced as my will to two unbiassed and enlightened observers, both leaning rather toward the sceptical than toward the credulous side of philosophic hesitation. In the same manner, Garrand never felt the paper hot or cold, but always light or heavy; and light or heavy in exact conformity to my will, previously and distinctly announced to credible witnesses. Had this man, too, been the only one of these patients on whom similar effects were produced, something might be attributed to accident, to a casualty of his temperament; but Goold was hardly less susceptible than he was: Mrs. Whitaker manifested analogous symptoms; and, in all, six out of seven patients experienced sensible and undeniable effects. Neither does the diminution of sensibility or of accuracy in these experiments invalidate their reality: it confirms it; because such a diminution is in perfect harmony with all the laws of physiology. The galvanic excitability of the dead frog is exhausted by repetition, and too frequent stimulation extinguishes even life.

Since these experiments were terminated, others have been made at three hospitals in London, and at my own house, in presence of some very eminent men. An account of them shall be given successively in this Journal. Conviction, of course, has reached these persons in different degrees; and, lest the opinion of any one of them should be attributed to any other, I shall forbear mentioning them until the exact words of each are attached to his name. In what I have to communicate, I shall state nothing which has not been submitted to the gentlemen whose testimony I adduce, for their approbation; and very often I shall be

able to quote their letters to me on the subject. My intention is to give, without reserve, and equally, an account of all the impressions, favorable and unfavorable, made by these experiments, and then to sum up the evidence on either side. In the present instance, the notes were taken, during each sitting, by Dr. Whymper himself, who communicated them to me; and from them I have drawn up the preceding narrative, adding only a few observations, which habit enabled me to make, and such explanations as appeared necessary to elucidate this unstudied subject.

HOSPITAL REPORTS,

(Principally condensed from various Periodical Publications.)

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

Report of Cases, attended by Mr. J. FOOTE, JUN.; under the Direction of Mr. GUTHRIE.

Purulent Ophthalmia of Infants.

I. EDWARD CHAMPION, æt. five weeks, was admitted Jan. 8th, 1829. The left eye was observed to be weak the day after he was born, but no discharge was observed until the next day, when it was in great quantity. Three days after, the right was found to be in the same state. The discharge is now thought to be less. Has had advice, and used lotions externally; has taken opening medicines likewise. Its mother is subject to fluor albus.—The Ung. Arg. Nitr. was applied, after syringing out the eyes with Lotio Aluminis; which was ordered to be used several times a day, on alternate days.

10th.—The discharge is considerably less; the eyes are much better.—Rep. Ung. et Lotio.

13th.—Nearly well. No discharge, except a very slight one in the evening. Opens its eyes with ease.—Rep. Ung. et Lotio.

15th.—Cured.

II. Edwin Carter, æt. eight weeks, admitted Feb. 19th, 1829. The right eye was first affected about three days after birth; the left, a day or two later. It commenced with a great discharge of matter. The lids were much swollen; conjunctivæ of both eyes much injected. Lids still swollen; discharge great; child restless; cornea of the left eye clear, of the right ulcerated and muddy. Has had a leech applied at three different times; blisters to the temples; has taken alteratives and used lotions, without effect. Mother subject to fluor albus.—Appl. Hirudines ij. temp. dextr. Ung. Argent. Nitr. ad sing. ocul. The eyes to be syringed out every hour with the Lotio Aluminis. Ol. Ricini ʒi. secundis horis donec solvetur alvus.

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Feb. 24th.—Freely purged by the Ol. Ricini. Can open its eyes itself. Discharge has ceased.—*Lotio Aluminis*.

27th.—Cured. In attendance on account of a leucoma remaining in the place of the ulcer, which has healed.

III. Edward Shaughslay, admitted March 26th, 1829; *ætat.* three weeks. The disease began about four days after birth, and has continued nearly three weeks. Great discharge; lids much swollen; child restless. Has had leeches applied twice; lids have been scarified. Mother has *fluor albus*.

The discharge is rather less; cannot open its eyes itself. On examining the left eye, the cornea appeared muddy, and had a speck on the centre; the conjunctiva much injected. The right eye could not be examined at that time, owing to the patient's resistance. In a few days afterwards it was examined, and appeared very like the left.—*Applic. Ung. Argent. Nitr. sing. ocul. Ung. Zinci nocte utend. ad palp. Lotio Aluminis sextis vices utend. in die alternâ. Pulv. alter. nocte sumend. Infus. Sennæ mane.*

28th.—Discharge as much as ever; lids less swollen; eyelids more easily opened.—Continue treatment.

31st.—Better. Discharge less.

April 4.—Opens his eyes easily. Discharge less.

9th.—Very little discharge.

11th.—Left nearly well, right much better.—Cont. treatment.

13th.—Left cured; right discharges still a little.

18th.—No discharge. Lotion continued.

21st.—Cured.

IV. Mary Kennard, *æt.* twelve weeks, admitted March 28th, 1829. *Lotio Aluminis* alone employed.

When five days old, the left eye became inflamed, and discharged yellow matter the next day. The right was not affected until yesterday. Two leeches were applied near the inner canthus on Wednesday: they bled profusely. Infant is restless at night. Has had castor oil frequently.—*Lotio Aluminis sæpe utend.*

30.—Much better. Opens her eyes.—Cont. *Lotio*.

31.—Continues better.—Rep. *Lotio. Habeat Pulv. alter.*

April 4.—Improving. Rep. *Lotio et Pulv.*

7.—The discharge more abundant; most from the right eye.—*Applic. Ung. Arg. Nitr. ad oculos dextro. Lotio ad ocul. sinist.*

10.—The right eye is the best.

21.—Better. Discharge thicker, much the same in quantity.—*Rep. Ung. dextro, et Lotio ad sinist. Pulv. alt. rep.*

23.—Discharge much less; can open her eyes much better.—Repeat.

27.—Nearly well. Discharge very slight.—Rep.

30.—Discharged, cured.

Muco-Purulent Ophthalmia. Second Stage of the acute Catarrhal Inflammation.

V. Jane Hazel, æt. one year, admitted May 7th. Caught cold by sleeping in a room with the windows open. On looking at the child next day, there appeared a black mark, or ecchymosis, circling the lower lid, as if from a blow. This was accompanied by a slightly increased flow of tears. The following night, the lids were much swollen; a secretion, thick and like matter, was discharged. The eye itself had not the appearance of inflammation at that time. The child appeared to suffer much pain, was restless at night.

The present symptoms are, a puriform discharge; lids much swollen; conjunctiva much injected, cornea clear; cannot open the eye; appears to suffer pain, is restless; tongue white and furred; bowels open by medicines. Has used lotions and fomentations to the eye.—The eye was immediately syringed out with some water; then the Unguent. Nigr. was applied. Calomel given to open the bowels. The eye to be kept clean.

8.—Discharge is thicker and in less quantity. Does not appear to suffer so much pain; slept well. Part of the conjunctiva appears to overlap the cornea. Lids are not so much swollen. Bowels freely open. Pulse rather frequent, between eighty and ninety. Tongue looks better; appetite better.—R. Hydr. Subm. gr. ij.; Pulv. Antim. gr. i. M. fiat pulv. nocte sumend. Lotio Aluminis ter quaterve die utend.

9.—Discharge is less, the eye otherwise much the same; right eye appears to partake in the inflammation. Sleeps tolerably well, but was rather restless. Bowels open, no fever, skin cool, pulse eighty.—Ung. Nigr. sing. ocul. Pulv. rep. Rep. Med. et Lot.

12.—Rather better; swelling of lids less; restless at night. Right much better.—Rep. Ung. ad sing. ocul. Rep. medic.

13.—Much better. Discharge much less; swelling of the lids has subsided; and also of the conjunctiva, it is not so much injected; can open her eye. The right eye is nearly well. Bowels open, skin cool. The powder does not remain upon her stomach.—Rep. Lotio. R. Hyd. Subm. gr. iij.; P. Antim. gr. iss. nocte sumend. Rep. med.

14.—Much better. Rep. Ung. et med.

17.—Has not attended for three days. The disease has returned nearly as bad as ever. The child is very restless; feverish at night; pulse ninety; no appetite; urine high coloured; can open its eye but little.—The eye was syringed out, and the Ung. Nigr. applied. Hirudines iij. temp. sinist. statim applic. Pulv. alter. nocte et mane. Inf. Sennæ mane.

18.—Discharge less; slept badly; bowels open.—Lotio Alum. quater die. Rep. medic.

20.—Slept better the last two nights, and is altogether better.—Rep. omnia. 21.—Rep. Ung. et Pulv.

22d.—Better. Rep. Pulv.

25.—Discharge very slight; nearly well.—Rep. Ung. et Pulv.

27.—Cured.

Sloughing Ulcer of the Cornea.

VI. Mary Mills, æt. ten, admitted Dec. 27, 1828. A large deep ulcer on the cornea, at its under and outer edge. The upper part of the ulcer sloughs; the rest of the cornea clear. Iris quite dilatable, but changed in colour, and red vessels are running upon it. Has great pain in the eye. Is restless at night; almost delirious.—Applic. Argent. Nitrat. in substance. Five ounces of blood taken by cupping. Pulv. Jalapæ comp. ʒss. mane.

28.—Says she is much better, that the touching the eye relieved her; slept well; has no pain.—Rep. Pulv.

30.—Says she is going on well.—Rep. Pulv.

31.—Repeat.

January 8.—Ulcer is spreading.—Appl. Argent. Nitrat. Pulv. repet.

13.—The ulcer is getting white towards the centre, showing a disposition to spread.—Arg. Nitr. Pulv. rep.

15.—Ulcer filling up.

20.—Appl. Arg. Nitr. Pulv. 22.—Better.

27.—Cured. Iris has perfectly regained its colour. A large leucoma is left.

Chronic Catarrhal Inflammation of Conjunctivæ.

VII. John Loughlin, æt. three years and a half, admitted Jan. 1, 1829. His eyes have been affected for three months, owing to frequent exposure to cold. There is much lacrymation; lids swollen and discoloured; complains of pain. The eyes themselves could not be examined, owing to the child's resistance. Bowels regular.—Ung. Arg. Nitr. sing. ocul. Inf. Sennæ mane.

6.—A little better. Continue.

10.—Much better; eyes discharge greatly. Rep.

15.—Worse. Rep. med.

20.—Much worse. In consequence, the stimulant plan was changed for the antiphlogistic: Hirudines iij. sing. ocul. Hydr. Subm. gr. iv. omni nocte. Inf. Sennæ mane sum.

22.—Can open his eyes; is much better.—Hirud. i. sing. ocul. Pulv. rep. et Inf. Sennæ.

25.—Rep. med.

27.—Much better.—Hirud. ij. sing. ocul. Pulv. rep. et Inf.

31.—Hirud. i. sing. ocul. Rep. med.

Feb. 5.—Hirud. i. sing. ocul. Rep. med.

7.—Rep. med.

10.—Nearly cured. Rep. med. 14th.—Cured.

Iritis of the left Eye.

VIII. John Perkins, æt. thirty-three, admitted June 13th, 1829. The eye has been affected for a fortnight: in the commencement

it was attended with deep-seated pain in the eye, and round the brow, which became much worse in the course of a few days; great dimness of sight, greater in the morning. There is not much pain now, nor does the light affect him much. About eight months ago had primary sores on the penis, for which he took mercury so as to affect the system; and for the last five months has had pains in his shin-bones, with sore throat, &c. Has merely applied leeches and taken aperients. The iris slightly dilates, is rather changed in colour. Zone of pink vessels surrounding the cornea. —R. Hyd. Subm. gr. ij. quartis horis. Appl. gutt. Belladonnæ.

14.—The eye feels easy; can see better; mouth not sore; pupil regular; iris has nearly regained its colour. Had a violent pain round the brow and in the forehead last night, and on rising this morning.—Cucur. cruent. ad. f3x. temp. sinist. Pil. Cal. gr. iij.; Pulv. Opii gr. 4, sextis horis sumend.

On the 23d of the same month, he sent a person to return thanks, stating that his eye is perfectly recovered, that he feels no pain, and can see as well as ever.

ST. GEORGE'S HOSPITAL.

Extensive Disease of the Arterial System. Rupture of the Right common Iliac Artery. Peritonitis, &c.

On the 27th of May last, the body of Elizabeth Hancock, sixty years of age, was examined.

The right leg was swollen and pitted on pressure, and its two lower thirds presented patches of livid discoloration of the skin, which also extended in a slight degree along the front of the thigh to the groin. The appearance was not that of mortification; for the whole circumference of the limb was not affected, and the deeper textures were perfectly sound, with the exception of the subcutaneous cellular membrane, which was infiltrated with serum and a little pus.

Abdomen: The peritoneum investing the liver, stomach, and indeed many other portions of the viscera, had shreds of coagulable lymph attached to it. There was no pus, little or no serous effusion into the abdomen, and the general peritonitis was but slight.

In the right iliac and inguinal regions, the pelvic cavity, and more especially on the right side of the latter, the inflammation of the peritoneum was more intense, and a couple of ounces of brown turbid fluid, apparently a mixture of serum and pus, had collected in the basin of the pelvis. In this situation the parts were all dark and modena-coloured, and, on dissecting the peritoneum from the abdominal muscles in the right groin, portions of coagulum, varying in firmness, and mixed with the products of inflammation, were discovered. This appearance on the outside of the peritoneum continued in the cup of the ilium, and particularly around

the iliac vessels, which, in fact, were enclosed by a stratum of denser coagulum, equalling their own diameter. It was thought that there might be phlebitis, and the iliac vein was cut out to be examined, but the tube was free from any inflammation.

Attention was now attracted to a dark-coloured tumor on the sacrum, in the situation of the great vessels. The viscera were cleared away, and the aorta and vena cava exposed from the diaphragm to the termination of their iliac divisions. The vena cava was then slit up, and its cavity found to be perfectly free. The tumor noticed before was now clearly proved to be a continuation of that coagulum which had accompanied the iliac artery to the groin, and diffused itself in the iliac and inguinal regions. It was firm, not very recent, and closely invested the vena cava at its lower part; after which it passed over the right common iliac vein, in company with the right common iliac artery and its prolonged external trunk.

The vessels, with the coagulum around them, were removed from the body, and carefully examined on the table. The aorta was universally diseased. In some places, patches of atheromatous matter, in others of cartilaginous, and in others (still more numerous) of actual ossific depositions, were found between the inner and the outer coats. The middle appeared to be the seat of the degeneration. Throughout the whole length of the tube, the internal coat was cracked and fissured in every direction, and the sharp osseous spiculæ projected into its cavity. In a number of places the external tunic alone remained to confine the blood. In the right common iliac, about half an inch from its origin, a nearly complete circle of osseous deposit reduced the caliber of the vessel to less than that of the superficial femoral in the middle of the thigh, and gave it exactly the appearance of a stricture. Immediately beyond this, the artery was dilated into a pouch the size of a filbert, and it seemed to be somewhere hereabouts (though we could not precisely ascertain the spot) that one of the fissures in the vessel had given way, and the blood got abroad into the loose cellular texture external to the peritoneum.

All the branches of the abdominal aorta were diseased in the same way as their parent trunk. The kidneys were wasted; the liver was dark coloured; the stomach healthy; the intestines externally healthy also, but internally not examined.

Thorax: The lungs and pleuræ were free from disease; the pericardium was natural, but its cardiac layer exhibited those white patches so frequently observed. The auricles of the heart were natural, and so were the parietes of the right ventricle, but its cavity was very small. The parietes of the left ventricle were upwards of an inch in thickness, its cavity remaining unaltered; in other words, it was hypertrophied without dilatation. The tricuspid and mitral valves were sound; the semilunar of the aorta were slightly indurated at their attached borders. The coronary arteries were extensively ossified, being reduced in more than one

situation to a firm, bony, and contracted ring. The pulmonary artery was perfectly healthy.

The arch of the aorta presented externally a beautifully injected and arborescent appearance of its vasa vasorum. It was greatly dilated at its origin, and its branches, the innominate, left carotid, and subclavian, were also much enlarged in their caliber. The dilated part of the arch, which was also the injected one, was free from ossific or atheromatous depositions, and its internal coat was sound. The remainder of the arch, the branches, and the descending thoracic portion, were equally diseased, and in the same manner as the abdominal.

The head was not examined.

We have given the dissection first, because with that commenced our acquaintance with the case, the previous part of which is involved in much obscurity. The patient applied to Mr. CATES only four days before her death, and we have been informed that the symptoms at that time were vomiting, pulse small and weak, tongue dry and brown, expression of countenance anxious and typhoid.

Mr. Cates sent her into the hospital on the 25th, the second or third day of her illness, where she was visited and prescribed for by the house apothecary, Mr. HUTCHINS, in the absence of Dr. CHAMBERS. She had now great tenderness over the abdomen; hot skin; pulse feeble, and 120; tongue dry and brown; teeth covered with dark sordes; bowels confined. The right leg and foot were the seat of dark erysipelatous inflammation, and purple vesications covered the inner ankle.

Mr. Hutchins ordered Hydrarg. Submur., Pulv. Ant. āā gr. iij. hāc nocte. Ol. Ricini ꝑiv.

26th.—Infus. Ros. ꝑiss.; Quin. Sulph. gr. iss.; Tinct. Op. ꝑv. quartā quāque horā.—Spir. Tenuior. ꝑij.; Liq. Ammon. acet. ꝑiv.; Mist. Camph. ꝑvi. M. fiat lotio cruri assidue appl.

In the evening a blister was placed on the abdomen, and an effervescing saline ordered to be taken every four hours.

On the 27th she died.

This dissection is interesting in several points of view. It shows how extensively diseased the arterial system may be, consistently with a tolerable performance of the vital and corporeal functions; and it illustrates a fact which we have often noticed, namely, the existence of hypertrophy of the left ventricle of the heart, along with disease of the coats of the blood-vessels. The smallness of the rupture in the common iliac will account for its not having killed *instantly*, by the sudden and profuse effusion of blood; and the greater consolidation of the coagulum immediately around the vessels, than of that in the groin and other situations, proves that the extravasation was slow and gradual.—*Medical Gazette*.

HOTEL DIEU.

Poisoning by Acetate of Copper. Efficacy of Albumen.

A MAN, aged twenty-six, of fair complexion, and not very robust, who had lived in Paris for the last four years, had experienced several attacks of vomiting and purging, was thin, pale, and of a very melancholy character. In 1824, he tried to poison himself by eating some *cicuta virosa*, but from the effects of which he soon recovered.

On the 18th October, 1825, he put eight sous pieces into a glassful of strong vinegar, and suffered them to remain there until the 25th. On that day he made a full dinner at two o'clock in the afternoon, and drank a bottle of red wine. At four o'clock he took half a glassful of the vinegar and copper, taking care to stir the money previously. After the lapse of another quarter of an hour, he drank the remainder of this mixture: he then washed the sous afresh with a little vinegar, and afterwards with a small quantity of brandy, and drank the whole. At seven o'clock his comrades found him stretched without sense upon the floor, and brought him immediately to the Hôtel Dieu.

On his admission, it was observed that all the muscles were agitated with violent convulsions, the limbs remaining rigid in the intervals. There was much difficulty in supporting the patient. The teeth were firmly closed; the breathing short; the pulse hard, small, and very slow. The stomach was tender upon pressure, which produced violent convulsions. No intelligence could be obtained as to the substance swallowed: the lips did not retain any relics that indicated its nature, nor had the breath any particular odour. The mouth was opened at length, and some glasses of warm water forced down; the uvula and pharynx were tickled with a feather, but without effect. He drank in the interval between the convulsions; and in about a quarter of an hour he came to his recollection in some degree, and explained the cause of his symptoms. The whites of eggs were then mixed, and beaten up with water, and he swallowed immediately several large glasses. The convulsions ceased immediately, but the hiccup continued during part of the night.

On the 26th, in the morning, the pulse was large, slow, and intermitting; the belly contracted, hard, and very sensible all over to the slightest pressure; slight convulsions in the limbs; general lowness, taciturnity, and paleness; the pupils were dilated; the tongue soft, moist, and pale. Thirty leeches were applied to the abdomen. Emollient cataplasms, decoction of linseed, clysters, and a rigid diet, were prescribed. In the evening, the patient was worse; the agitation was extreme, attended with colics, dyspnoea, hiccup, and a hard and contracted pulse. Forty leeches were applied to the belly. The urine was scanty and scalding. The use of the water, with albumen, was continued. One hard motion followed the third clyster. The night was passed badly.

27th.—The amendment was striking: the pulse had become soft, the abdomen free from pain, the urine free, and a liquid motion had passed. The same treatment was continued.

From this day the amendment continued; and in ten days the digestive functions were re-established, and all the bad symptoms had disappeared. The moral condition of the man had not, however, improved: he still continued taciturn, motionless, with a pale countenance and a dry hot skin, and slept but little. He quitted the hospital on the 8th of November.

According to the experiments of M. DROUSAIT, as recorded in M. ORFILA's work, the acetate of copper is endowed with properties much more active than common verdigris, which is explained by the much greater solubility of the former substance.

In the above case, the substance had been swallowed above three hours; the nature of the poison was then unknown, and there was nothing to lead to that knowledge. It was not known whether the patient had vomited or not; it therefore became necessary to provoke that action of the stomach. The patient, however, recovered in some degree, so as to explain the nature of the poison: then albumen was administered. All the pretended antidotes of copper are not to be compared to this simple means, so easily to be met with every where, and under all circumstances. The sulphurets of potash, of lime and iron, mentioned by NAVIER, decompose the salt of copper, but the precipitate retains sufficient poisonous properties to produce mischief. Saline and earthy alkalis cause the same effects. The infusion of galls, mentioned by M. CHANSAREL, is nearly inefficacious. Sugar has been eulogised by M. MARCELEN DUVAL as the real antidote to copper, but the experiments of MM. ORFILA and VOGEL have proved the contrary. It is not so with albumen: this substance decomposes the salts of copper at an ordinary temperature; it should therefore be immediately administered, favoring the vomiting and purging by proper remedies.—*La Clinique.*

HOPITAL DE LA PITIÉ.

Fistula of the Parotid Duct and Gland successfully treated.

By M. BECLARD.

A YOUTH, aged eighteen, lacerated his cheek by falling upon an iron stove. One of the upper screws penetrated the cheek, wounding the buccinator muscle near the masseter, though it does not appear that it reached the mouth. The wound healed rapidly, with the exception of a small fistula, through which there was a discharge of a clear liquid, especially while he was eating. This showed that the stenoian duct had been wounded. After having fruitlessly employed the several means which were directed by his attending surgeon, on the 21st of May, 1821, he placed himself under the charge of M. Beclard, in l'Hôpital de la Pitié. It had been three years since he had received the injury.

M. Beclard converted the fistula into a recent wound, by the excision of its sides; then, with a small trocar, he perforated the cheek from the wound, passing the instrument obliquely backwards. Having withdrawn the stilet through the canula, which remained in the perforation, he passed the end of a leaden wire. Having withdrawn the canula, he in the same manner made a second puncture; beginning, however, within the mouth, about three lines anterior to the former puncture, carrying the point of the instrument obliquely, till it passed into the wound near the place where the wire was inserted. The external end of the wire was passed through this opening into the mouth, being thus bent somewhat in the form of the letter V. The ends of the wire were twisted together, and the external wound was closed by a needle and the twisted suture. For the first three days, there was some distention and pain, owing to the saliva not passing at first very readily by the side of the leaden wire. On the fifth day, the saliva passed freely into the mouth, and the swelling was nearly gone; the external wound had united, and the needle was now removed. Still the internal fistula was not so complete as to carry off all the saliva while the patient was eating. The duct was distended into a kind of sac, producing, during his meals, a small tumor, which was, however, easily emptied into the mouth, by a very slight external pressure. The leaden wire remained inside the cheek, till it fell out in September, when the cure was complete.—*Archives Générales.*

MAISON DE CORRECTION DE MEINENGEN.

Case of general Emphysema. By Dr. JAHN. (*Magazin für die Gesamt. Heilkunde.*)

A PRISONER, who for some time had laboured under a dropsical affection, which appeared to depend upon habits of intemperance and scanty diet, was chastised by one of the keepers. On the next day no traces of the punishment were observed, excepting a slight ecchymosis on the left lumbar region. The second day, the neck, face, and breasts began to swell, and the crepitus which was felt on touching the swollen parts left no doubt that air was effused under the cellular tissue. The patient made no complaint, and his breathing was natural. During the next night the swelling extended rapidly over the head, the trunk of the body, and the limbs. There was now great anxiety, violent cough, and a sensation of oppression in the chest, as though the lungs were compressed and pushed upwards. In the morning, the sense of suffocation was so great that the man was desirous of procuring some instrument with which he might make incisions into the skin for the purpose of giving exit to the air.

Dr. JAHN, on the following day, found the patient in a very dangerous condition. He was sitting up in bed, supported by nurses. The head, trunk, and extremities were at least double

their natural size. The upper eyelids looked like bladders, and were as large as an apple. Even the eyeballs were emphysematous, and projecting from the orbits. The parts within the mouth were also tumefied with air. The scrotum was of an enormous size, and the penis as large as an arm. An oily sweat, of a peculiar appearance, covered the whole surface of the body, which sounded like a tambour if struck, and crepitated loudly when pressed with the hand. There was violent dyspnœa; respiration quick, sibilous, and performed with great difficulty, the patient being obliged to extend his neck, and grasp something near him. Froth issued from the mouth, and he coughed frequently. He was incapable of speaking, but his senses were undisturbed.

A trocar was plunged into the scrotum, and instantly a large quantity of inodorous gas escaped with great force and a whistling noise through the canula. The patient was immediately relieved, and in every part the swelling quickly diminished. He breathed easier and deeper, and began to joke at his previous appearance.

He now stated that he had at first experienced a peculiar sense of compression in the lungs, which gradually increased; and then a violent constriction of the glottis; and, lastly, a sense of suffocation, as if there was no exit for the air contained in the chest.

As the puncture of the scrotum was insufficient to give vent entirely to the air contained in every part of the body, several others were made with the same instrument in the limbs, back, and chest. Air still, however, continued to be disengaged in the cellular tissue; but its accumulation was prevented by repeated punctures.

As soon as the state of the patient would permit, the thorax was attentively examined; but the most careful inspection could discover neither fracture nor depression of the ribs, nor laceration of the muscles. In fact, no perceptible lesion existed; besides which, the man had complained of no internal pain. He spoke only of a stiffness in the trunk of the body, which soon ceased.

He was put upon a strict antiphlogistic regimen, and the next day he was quite well. For ten days air continued to accumulate under the skin in small quantities, but moderate frictions caused it to disappear. On the twelfth day the legs were slightly œdematous, but this symptom was quickly removed by appropriate treatment.

PHILADELPHIA ALMSHOUSE INFIRMARY.

Gangrene of the Right Lung. By Dr. SAMUEL JACKSON.

RICHARD HARRISON, aged forty-three years, was admitted on the 20th of November, in the cells, with mania a potu, for which he was treated with the usual remedies, and entirely recovered. On the 26th, complained of pain in his right side; pulse frequent and tense: was ordered to be freely cupped over the seat of pain.

Next morning felt greatly relieved; but, his eye being much

inflamed, and having an ulcer on the cornea, he was ordered to the Eye ward, where he was principally treated for that affection. The cups were repeated twice to his chest with advantage; he also made use of a common cough mixture, and drank freely of flaxseed tea, containing Supertart. of Potash $\mathfrak{z}\text{ij}$., Tart. Antim. gr. ij .; his diet being gum-water and gruel. Was removed into Clinical ward.

December 12th.—On examination of his chest, percussion elicits a very flat sound all over the right side, and no respiration can be heard in that lung; he coughs very often, and brings up with difficulty a viscid, thick expectoration, some of which adheres to the vessel when reversed; tongue covered with a thick, dark fur; pulse frequent and irritated; bowels much disordered; abdomen tense; breath fetid.—Ordered Tinct. Opii $\mathfrak{z}\text{iv}$.; Tart. Acid. gr. xij .; Water $\mathfrak{z}\text{ij}$., teaspoonful occasionally.

Evening.—Much worse; cough almost constant. On examination, gangrene of the right lung suspected.—Ordered opiates to be freely given.

13th.—Continues to sink: respiration can be heard all over the room; pulse very small and frequent; tongue very foul, and breath extremely fetid; diarrhœa has supervened. He continued to take opiates, but he gradually sunk, and died about twelve p.m.

Case reported by Dr. CLARK.

Autopsy.—An examination was made of the body, but limited merely to the thorax, in order to determine the condition of the lungs. The left collapsed when the sternum was raised, and was perfectly natural in structure. The right exhibited the appearance of a soft grumous mass, of a black colour. No adhesions of the pleura existed. On attempting to remove the lung from the cavity, it was ruptured, and the lower and middle lobes exhibited the semblance of a quantity of putrid coagulated blood, and exhaled a most offensive odour.

Remarks.—This case offers another instance of the extreme disorganization which may occur in the viscera of drunkards, without exhibiting premonitory symptoms to induce a suspicion of the intensity of the disease. Harrison was brought to the infirmary, for the third or fourth time, with mania a potu. At this period he had no cough of consequence, and attention was not directed to his thoracic organs. It is, notwithstanding, most probable that he was then labouring under the pulmonary affection that terminated his existence. As the symptoms of mania subsided, some cough was noticed, but it could not have been urgent, as the resident physician did not direct my notice to it. Being transferred to the Eye ward, he was not under the observation of the medical attendants until he was brought into the Clinical wards, two days previous to his death.

The affection of the right lung approached, in its anatomical characters, to the uncircumscribed gangrene of Laennec, which he states "may be placed in the number of the most rare of the organic diseases." This morbid organic affection occurred but twice

in the extensive researches of this eminent cultivator of pathological anatomy in a space of twenty-four years; and but five or six instances of it had been met with in the hospitals of Paris.

At first it might be looked upon as pulmonary apoplexy; but this disease is always in circumscribed spaces of the lung, and is accompanied with profuse hæmoptoë, which in this case was absent.—*American Journal of Med. Sciences.*

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
illa, prius, cretâ; mox hæc, carbone, *notamus.*—PERSIUS.

A Pathological Inquiry into the secondary Effects of Inflammation of the Veins. By JAMES M. ARNOTT, Surgeon. (From the fifteenth Volume of the Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London.—8vo. pp. 131. 1829.)

WE have, upon more than one occasion, declined entering upon the subject of venous inflammation, until the present very valuable pathological contribution of Mr. ARNOTT's came under our notice. We shall now give a copious abstract of his paper.

It is not necessary to preface our analysis by formally pointing out the importance of the subject. The numerous and curious facts which have lately been given to the profession relating to the origin and progress of phlebitis, and the obscurity that hangs over the pathology of the disease, are well known to every medical reader, and must have excited his attention. It is true that the subject has been frequently touched upon by various able writers and acute observers, but still we were much in need of a succinct and satisfactory collection of cases, and of a complete revision of former opinions respecting the pathology of venous inflammation and its consequences; for the present investigation will show that the doctrines maintained, even but a few years ago, upon this very important point, were, if not altogether, at least to a great extent, founded upon erroneous views and a superficial examination of the subject.

Considerable doubt still seems to prevail as to the cause of the alarming constitutional affection frequently attendant on phlebitis, and much obscurity exists as to the origin of those abscesses and inflammations in distant parts, which sometimes occur after injuries. Mr. Arnott conceives that "an attempt to remove the one, and to dispel a portion of

the other, may not therefore be considered as altogether unworthy of notice."

The attention of Mr. A. was particularly directed to this subject by some occurrences which marked the course and termination of three fatal cases of inflammation of the veins after venesection, which he had an opportunity of observing.

"In one of these, a deposition of pus, without signs of previous inflammation, took place under the skin of the opposite forearm; in another, destructive inflammation of the knee-joint, with a deposition of pus into the cellular substance of the thigh; and in the third, collections of matter at several points in the substance of the lungs; while, in all three, the inflammation of the vein did not extend to the heart. These circumstances suggested inferences as to the cause and nature of the constitutional affection in cases of phlebitis, and views with regard to the origin of abscesses in remote situations arising from injuries, which led to an examination of the evidence on both these subjects, to be found in the writings and observations of others." (P. 1.)

As we intend to confine ourselves principally to the opinions entertained by Mr. Arnott, we shall pass rapidly over the retrospective view he takes of the statements of previous writers upon the subject, which it was, however, very necessary he should introduce for the purpose of showing he had imagined no discrepancy of opinion that did not really exist. Mr. HUNTER, in his original essay on Inflammation of the Internal Coats of Veins, threw out two suggestions as to the manner in which this affection might influence the constitution. He remarks that, "in all cases where inflammation of veins runs high, or extends itself considerably, *it is to be expected* that the whole system will be affected. For the most part, the same kind of affection takes place which arises from other inflammations, with this exception, that, where no adhesions of the sides of the vein are formed, or where such adhesions are incomplete, pus, passing into the circulation, may add to the general disorder, and even render it fatal."* Mr. Hunter likewise supposed that death might arise from the inflammation of the vein extending to the heart.

Mr. HODGSON† states that the inflammation extends in

* Influenced by this view of the circumstances which favor the occurrence of alarming symptoms in cases of phlebitis, Mr. Hunter in one case applied pressure above the wounded portion of the vein, so as to bring the sides of the vessel into contact, and to cause their adhesion. This case terminated successfully.—*Transactions of a Society for the Improvement of Med. and Chir. Knowledge*, vol. i. p. 29.—REV.

† On Diseases of Arteries and Veins, London, 1815, p. 511.

some instances even to the membrane which lines the cavity of the heart, and he describes the symptoms which attend the disease as having a striking resemblance to those of typhous fever. Mr. H. considers that the constitutional irritation may be an effect produced upon the nervous system by the pus which is secreted into the vessel being mixed with the circulating blood. Although Mr. Hodgson was aware of the very formidable character of the symptoms dependent upon phlebitis, we believe he does not point out the various organic lesions which so frequently follow, and respecting which Mr. Arnott has given us so much useful information.

Mr. TRAVERS* distinguishes the cases where inflammation of the vein terminates in the formation of pus, and where it terminates in the deposition of adhesive matter or lymph; the latter extending to the trunks of the system, and sometimes, it is said, reaching the heart. He observes, there is a marked difference in the symptoms accompanying these states: the first is a protracted irritation, producing hectic, and ending in exhaustion; the second is a typhoid fever, which, speedily producing delirium, terminates within a few days. The former cases, although always dangerous, are sometimes recovered; the latter, he imagines, never. Mr. T. then proceeds,

“ There have been many conjectures respecting the cause of the fatal termination of these cases, at which I confess I feel surprised: among others, the inflammations by extension to the heart, or the membranes of the brain, and the conveyance of pus into the circulation, have been mentioned. Not to insist on the innocuous quality of pus, it should be observed, that the most rapidly destructive inflammation is that which has the true adhesive progress, in which no pus is secreted. But, if we consider the importance of the veins in the economy, the extent of surface which the collective arææ of the venous trunks afford, (larger, I imagine, than any of the shut sacs of the body,) and the diffused and disorganizing character of the inflammation, we can surely be at no loss to account for the disturbance of the system. It is an error to suppose that any quicker sympathy exists between the constitution and the venous, than the arterial or absorbent, system. I say this, because I have observed something like that superstitious alarm which is excited by events that we do not expect, and cannot explain, has been produced by the fatal catalogue of tied veins, and a comparison of this with the generally successful cases of tied arteries. All the mystery of veins is, as I have attempted to show, that they are indisposed to inflame, but, when excited,

* Essay on Wounds and Ligatures of Veins, in Cooper and Travers' *Surgical Essays*, vol. i. third edition, p. 286. London, 1818.

inflammation by continuity, and therefore it is that the constitution sympathises so deeply."* (P. 5.)

Mr. GUTHRIE, who observed the veins inflamed after amputation, in connexion with, or, as he believes, as a consequence of a diseased condition of the stump, assumes† that inflammation of the veins is of two kinds, viz. the adhesive or healthy, and the irritative, erysipelatous, or unhealthy. The first kind is represented as seldom observed, but, when observed, is usually cured; the latter is almost as invariably fatal, but in what manner he offers no explanation.

Sir ASTLEY COOPER‡ asserts that sometimes life is destroyed by inflammation extending to the large vein and to the heart. He also remarks, that if the matter resulting from the suppurative inflammation does not point, but remains in the veins, it produces excessive constitutional irritation, which destroys life.

The opinions of BRESCHET, BOUILLARD, and RIBES, are also referred to.

It appears, then, that, although the violence and fatality of the constitutional affection arising from phlebitis have been equally recognised, several explanations are given of the circumstances upon which these more immediately depend; and that, of the opinions expressed, even those which have most probability in their favor rest on somewhat uncertain grounds.

"The doubt, therefore, (says Mr. Arnott,) that still remains is rather attributable to the question not having received that careful consideration which is requisite in order to arrive at a satisfactory conclusion, than to any deficiency of materials to enable us to do so. In attempting this on the present occasion, I shall first offer a succinct account of several cases of phlebitis, where death was clearly referable to its occurrence, and the bodies were subsequently examined, so as fairly to represent the circumstances which characterised the origin, course, and termination of the constitutional affection; and, having done so, I shall proceed to draw such conclusions, accompanied by remarks, as the facts seem to justify." (P. 9.)

Several of the cases adduced were the result of Mr. Arnott's own observations; others are derived from various

* But, as the current of blood is centripetal in the veins, if any vitiated secretion enters them, the constitution is certainly more likely to suffer than if the same accident occurs in the arteries in which the course of the blood is eccentric.—REV.

† Treatise on Gunshot Wounds, third edition, p. 299.

‡ Lectures on Surgery, by Tyrell, vol. iii. p. 205.

sources, but their selection has been restricted to cases of phlebitis arising from wounds, the injury being either slight, or, where extensive, the connexion between the inflammation of the vein as the primary affection, and the constitutional as the secondary, being too obvious to be mistaken. As the present investigation is strictly pathological, the details of treatment are omitted.

Having detailed seventeen cases of fatal phlebitis, Mr. Arnott enters upon the argumentative part of his paper.

“ From these seventeen cases of fatal phlebitis, the first conclusion deducible is, the total disproof of the assertion that death results from the extension of the inflammation of the vein to the heart. In none of the ten instances following venesection was the superior cava affected, much less the heart; and in half this number inflammation had not reached to the subclavian, or even to the axillary vein. In the cases where the inferior cava had become inflamed, there is only one in which the heart is represented to have been actually implicated; and here, the deposition of lymph terminating at the entrance of the emulgent vein, the observation is, that ‘there were marks of diffused inflammation extending to the right auricle of the heart, but the signs of adhesive inflammation terminated as described.’

“ As a cause of death, then, the extension of the inflammation to the heart may be considered as a mere matter of assumption, the history of the error being simply this: Mr. Hunter’s observations not having enabled him to form a decided opinion as to the cause of death, when this affection occurred in the jugular vein of horses, he suggested, as a query, whether it might not depend on the inflammation extending to the heart? By succeeding writers this suggestion was adopted without examination, and without any evidence being offered in its support. Indeed, the circumstance itself is of very unusual occurrence; for, with the exception of the instance just alluded to, I have only found two others in which it is alleged that the inflammation had extended from the vein to the heart, and in these the description is not very precise.”

“ As the preceding remarks have indicated, there are considerable differences in the extent of vein occupied by inflammation in fatal cases of phlebitis. Sometimes the disease has spread into several or most of the veins of a limb from that primarily affected; at others, it has not proceeded beyond the vessel in which it originally appeared. This last circumstance, with that of the fatal consequences sometimes ensuing from inflammation, limited to a few inches only of a vein, (as of about six of the cephalic, in the case of Arnold,) justifies the inference that the dangerous consequences from phlebitis bear no direct relation to the extent of the vein which is inflamed.”* (P. 42.)

* M. DANCE, who has lately detailed many cases of fatal phlebitis, comes to the same conclusion. It is his opinion that danger arises not so much from
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In endeavouring to ascertain the nature of the connexion between the primary and secondary affections in this disease, the next question is,

“Whether the latter depends, as has been alleged, upon the entrance of pus into the circulation. We are thus led to inquire into the contents of the inflamed vessels, and on referring with this view to the cases which have been adduced, it will be found that in a number of them, where an open wound existed in the vein, pus was discharged from it during life. Whilst, in fourteen cases out of seventeen, pus, or pus in conjunction with lymph, was present in the vessel after death. In two instances no mention is made of pus, the contents of the veins being described in the one as ‘adhesive matter;’ in the other, where the cava was concerned, as ‘flakes of lymph.’ In one case only, where the inflammation occurred in a vein previously diseased, or in a vein the branches of which at least were varicose, neither pus nor lymph was found in the vessel.

“It results from this statement, that, although pus is present in the veins in the great majority of fatal cases of phlebitis, and that, although it should appear from the character of the general symptoms, and the effects produced upon animals by the injection of a similar fluid into their vessels, that the passage of pus into the circulation is probably the principal, yet the circumstances do not justify us in regarding it as the sole cause of the secondary affection. In addition to the presumed absence of pus in two instances, and to its declared absence in a third, it may be remarked, that the early appearance of the symptoms in some cases seems scarcely to correspond with the time usually required for the production of pus, as in one which occurred to Mr. Freer, where they came on, suddenly, four hours after ligature of the saphena. If, then, the constitutional affection in phlebitis is to be explained by the introduction of a fluid into the circulation, which contaminates the blood and operates as a poison, this property must be attributed to inflammatory secretions generally from the vein, although not purulent; and it remains to be seen whether the symptoms of this affection are such as can be accounted for by the passage of pus only into the system.” (P. 44.)

Before quitting the subject of the local affection, Mr.

the venous inflammation, as from the vitiation of the blood by pus having entered the general circulation. (*Archives Gén.* Février, 1829, p. 182.) BLANDIN, also, (*Journ. Hebdomadaire*, No. 26, 1829, p. 591,) contends that the severity of the disease does not depend upon the extension of inflammation from the part of the vein originally affected, but that, on the contrary, it is the product of this inflammation, which mixes with and alters the state of the blood. M. B. endeavours to explain the cause of the different degrees of severity in the symptoms of phlebitis. Sometimes, he observes, the inflammation may affect only the external cellular sheath of the vein, or the internal coat of the vessel may be inflamed. In the former case, the constitution will not materially suffer; while, in the latter case, death is almost invariably the consequence.—REV.

Arnott briefly alludes to a circumstance which has escaped the notice of those who have previously treated of inflammation of veins, viz. the point at which the inflammatory changes in the coats usually terminate.

"According to my observation, these changes are limited by the passage of a current of blood; where a trunk is concerned, the boundary being the entrance of a branch, and, where a branch is concerned, the boundary being the junction of this with the trunk."* (P. 46.)

Mr. Arnott does not pretend to explain how it happens that this same inflammation, which has stopt short at the entrance or passage of a current of blood, may not only already have passed several currents, but have extended itself into the vessels conveying them.

The secondary affection in phlebitis usually shows itself in from two to ten or twelve days after the receipt of the injury which has occasioned the inflammation in the vein: when the vessel has been previously diseased, sometimes sooner. The symptoms are as follows:

"Great restlessness and anxiety, prostration of strength and depression of spirits, sense of weight at the precordia, frequent sighing or rather moaning, with paroxysms of oppressed and hurried breathing; the patient at the same time being unable to refer his sufferings to any specific source. The common symptoms of fever are present; the pulse is rapid, reaching sometimes to 130 or 140 in a minute, but is in other respects extremely variable. There is often sickness and violent vomiting, especially of bilious matter. Frequent and severe rigors almost invariably occur, sometimes to the number of three or four in the course of a few hours. The general irritability and deep anxiety of countenance increase, the manner is quick, and the look occasionally wild and distracted. When left to himself, the patient is apt to mutter incoherently, but, on being directly addressed, is found clear and collected. The features are pinched, and the skin of the whole body becomes of a sallow, or even yellow colour.†

"Under symptoms of increasing debility, and at a time when the local affection may appear to be in a great degree subsiding, secondary inflammations of violent character, and quickly terminating in effusion of pus or lymph, very frequently take place in situations remote from the original injury; the cellular substance, the joints, and the eye, have been affected; but it is more particu-

* The same inference would be drawn from the appearances found upon dissection of many of M. Dance's cases. (*Arch. Gen.* tome 18, 19.) M. Dance has not, however, adverted to this fact. Blandin states, that, "en général, le pus est circonscrit entre des valvules, au-dessus et au-dessous de veines collatérales volumineuses." (*Journ. Hebdom.* No. 26, March 1829.)—REV.

† This appearance of the surface is not invariably observed in cases of phlebitis.—REV.

larly under a rapidly developed attack of inflammation of the viscera of the chest that the fatal issue usually occurs. Whether this is observed or not, death is always preceded by symptoms of extreme exhaustion, such as those of a rapid feeble pulse, dry, brown, or black tongue, teeth and lips covered with sordes, haggard countenance, low delirium, &c." (P. 52.)

The duration of this affection offers some variety. In some cases the patient dies a few days after the division of the vein; in others, the symptoms run on for several weeks.

The morbid appearances found in cases of phlebitis are very remarkable, and are such as we usually regard to be indicative of the recent existence of violent inflammation, and that, too, in various organs and distant parts of the body.

"In the chest, effusions of sero-purulent fluid into the cavities of the pleuræ and pericardium, exudation of coagulable lymph on the surfaces of the heart and lungs, hepatization of the latter organ, the infiltration of pus into its tissue, or small collections like a mixture of pus and lymph. Such appearances presented themselves in ten cases out of seventeen; in three, the thorax was not examined; in two, the condition of its contents is not noted; and in two, no diseased appearances were observed.

"In the cellular substance, intermuscular as well as subcutaneous, pus and sero-purulent fluid have been extensively deposited, sometimes in collections like abscesses, at others appearing more like an effusion into its cells than as resulting from the common process of inflammation. These collections most frequently occur in the vicinity of the joints. In two cases pus was deposited under the skin of the opposite forearm, near the wrist; in one, with inflammation of the knee-joint, into the intermuscular cellular substance of the corresponding thigh, and into that external to the joint of the opposite shoulder; in one, into the intermuscular cellular substance of the opposite leg and of both forearms; in one, into the interfibrillar cellular tissue of the corresponding pectoral muscle; and in another, between the sternal extremities of the two first ribs and pleura.

"A disease of the joints, consisting of a most violent inflammation of the synovial membrane, its distention with purulent matter, destruction of the cartilage, and baring of the bones. These changes, too, taking place in the brief space of a few days, the knee having been first attacked with pain four days before death, which, again, took place in sixteen from the date of the injury of the vein which caused its inflammation. In two other cases there was affection of the knee-joint, but the parts were not examined after death.

"In the eye, opacity of the cornea, injection of its blood-vessels, and destructive changes in its humors or coats, occurred in one case.

“ Besides these affections, there were found in five instances, within the cranium, opacity and thickening of the tunica arachnoides, effusion between it and the pia mater, and increased secretion into the ventricles. In nine the head was not examined; in three no morbid appearances were noticed.” (P. 54.)

The morbid appearances above described are met with singly or variously combined in particular cases; and, from the variety of situations in which these secondary local affections have been observed, it seems probable that there are few organs or parts in which they may not occur. “ But, although some of them are generally found present, the constitutional affection in phlebitis occasionally proves fatal, without a secondary local affection having developed itself.”

On considering the progress of the secondary affection in phlebitis, it is impossible not to be struck with the resemblance which this bears to that of diseases arising from the inoculation of a morbid poison.

“ There is, in the first place, a local affection, (it may be of very trifling extent and severity,) upon which the secondary affection supervenes in the form of great constitutional disturbance followed by violent inflammations in one or more parts of the body. With this general resemblance to inoculated diseases, there is one to whose characters it more particularly approximates: viz. that which arises from the operation of poison received in wounds from dissection. We have an equally early appearance, and an equally rapid development, of symptoms nearly similar; succeeded by destructive inflammations in one or more situations remote from the primary affection, with equally fatal results. These secondary inflammations very much accord also in the parts which they attack. If the cellular substance is in a particular manner affected, in consequence of the introduction into the system of the poison of dead animal matter: this also occurs as a consequence of phlebitis, and some of the more obscure affections of the first class of cases may even, perhaps, be elucidated by the events of the latter.” (P. 57.)

In a note Mr. Arnott observes, that the affection of the cellular substance, as a consequence of wounds received in dissection, is, like that from phlebitis, neither continuous nor limited to the side of the body on which the injury has been inflicted.

In corroboration of this statement, several cases are referred to.

“ In conclusion, it results from the foregoing facts and arguments that death, in cases of phlebitis, does not take place from the inflammation extending to the heart; whilst the history and character of the symptoms which precede this event, the very small portion of vein which is sometimes found to have been inflamed,

and the general presence of pus in its cavity, all tend to establish that the entrance of this fluid into the circulation is the principal cause of the alarming and fatal consequences of phlebitis; a similar influence being, perhaps, also possessed by any inflammatory secretion from the vein." (P. 61.)

Part Second.—The fact of purulent matter being sometimes deposited without much sign of previous inflammation, in a part of the body remote from one in a state of suppuration, has been long known in the history of medicine, under the name of abscess by metastasis; and it was formerly supposed that the matter was taken up and transferred, ready formed, to its new situation. Upon the subject of a translation of purulent matter, Mr. HUNTER's opinions were very decided: he discredited it as an occurrence, and as an operation he declared it to be absolutely impossible.*

"Mr. Guthrie,† in directing attention to a sudden and insidious attack of inflammation of particular parts, and especially of the lungs, as a cause of death after secondary amputation, (and of which inflammation, when the viscus affected is other than the lungs, he believes the termination is less rapid, suppuration taking place and abscesses being formed,) considered it as depending 'on the alteration which takes place in the sanguiferous system in consequence of the amputation, and the suppression of the discharge causing fever, and a determination to, and irritation in, a particular part.'‡—"The viscera in each person most predisposed to disease being most likely to be affected."§ (P. 65.)

Pleurisy and tuberculous abscesses in different organs of the body, taking place subsequent to great surgical operations and suppurating wounds, have been the subject of several valuable communications from M. VELPEAU.|| Mr. Arnott has not alluded to the theory which attributes the formation of these abscesses to a disturbance of the nervous system, the opinion itself being so purely conjectural, and the operation of the cause so undefined and unintelligible as to render this unnecessary.

"In fact, the only view of the subject, supported either by evidence or argument, is that which considers the origin of abscesses and inflammations in remote situations after injuries as connected with the absorption into the circulation of purulent matter from a wound. That they depend on the entrance of such fluid into the blood, the consequences which have been observed to follow phle-

* Hunter on the Blood, 4to. London, 1794; p. 360.

† On Gunshot Wounds, first edition, 1815; p. 73 et seq.

‡ Ibid. second edition, 1820; p. 235.

§ Ibid. p. 253.

|| Revue Medicale, Juin, Juillet, et Decembre, 1826; Mai, 1827.

bitis simply sufficiently testify; and it becomes a question whether the occurrence of phlebitis, and the passage of pus from an inflamed vein into the circulation, is not of itself sufficient to account for the secondary affections of wounds, without its being necessary to resort to an absorption of the same fluid from their suppurating surfaces.* (P. 67.)

The secondary affections succeeding to wounds, are effusions of pus and sero-purulent fluid into the cavity of the chest, and inflammation of the pleura; similar affections of the cellular substance; effusion of pus into, and inflammation of, the synovial membranes; depositions of pus and tuberculous abscesses in different organs of the body, viz. in the brain, lungs, heart, liver, spleen, and kidney.

“ Now, when it is considered that abscesses have formed in various parts of the body from the ligature merely of a vein, as of the saphena;† that pus was deposited under the skin of the forearm in the case of Brancher; that rapidly destructive inflammation in the knee-joint took place in the case of Arnold; that the same occurred in the eye in the case of Dodging; that, where symptoms of inflammation of the chest were observed during life, the effects witnessed, on examination after death, were of very disproportionate degree and extent; and that effusions of coagulable lymph and sero-purulent fluid into the chest, together with abscesses in the lungs, were found where no symptoms had indicated their existence: I say, when it is considered that all these consequences ensued from so simple and definite an injury as the puncture, division, or ligature of a vein, it is impossible to resist the supposition that, where similar secondary affections have succeeded to a more extensive wound, they may in reality have originated in the same cause, viz. inflammation of a vein or veins.

“ If such view of the subject is correct, we ought, on the one hand, in cases where the consequences already mentioned have succeeded to wounds and injuries, whether of the extremities or head, to find evidences of inflammation of the veins of the part which had been primarily or mechanically injured; and, on the other, to meet with similar secondary affections in cases where inflammation of the veins is known to be of common occurrence, as after parturition.” (P. 68.)

That this is actually the case, Mr. Arnott proceeds to show. He relates four instances in which secondary affections of the viscera occurred after injuries of the extremities,

* Blandin (*Journ. Hebdom.* No. 26, March 1829, p. 585,) and Dance (*Arch. G n rales*, Fev. 1829, p. 169,) without denying the absorbing power of the veins, are of opinion with Mr. Arnott, that the pus detected in the veins in cases of phlebitis is the product of inflammation of the coats of the vessel. By both these pathologists the question is ingeniously argued.—REV.

† Carmichael, in *Trans. of the King and Queen's College of Physicians*, vol. ii. p. 346.

in connexion with inflammation of the veins in the wounded limb.

We now arrive at some interesting observations upon affections of the viscera, of the joints, and cellular substance, after injuries of the head.

Abscesses of the liver after injuries of the head long excited curiosity, and a variety of speculations were indulged in to account for the occurrence. Systematic writers afford us no satisfactory information as to the nature of those injuries of the head to which secondary affections of the viscera, of the abdomen and chest, succeed; neither do they explain the circumstances under which they occur. To supply this deficiency, and to enable us to form more satisfactory conclusions as to the origin and cause of secondary affections in distant parts after injuries of the head, Mr. Arnott refers to thirty-three cases, selected from various good authorities.

“From a consideration of these cases, it appears that affections occurring as secondary to injuries of the head were observed, in twenty-one, seated in the abdominal viscera; in five, in the thoracic; and in six, in the abdominal and thoracic conjointly. That they consisted of collections of pus in the liver and in the lungs; and of effusions of pus and sero-purulent fluid into the cavities of the chest. That, combined with some of these, there was further observed a deposition of purulent matter, in one case, in the substance of the heart; in one, in the kidney; in one, in the spleen; and in one, under the integuments of the back; in one, albuminous effusion on the surface of the intestines; and in one, inflammation of the liver, without the formation of matter. In two cases, inflammation of the surface of the liver, with suppuration, was the only morbid appearance observed. In one case, an affection of the joints, and the deposition of pus into the cellular substance around them, occurred without any disease of the abdominal or thoracic viscera having been noted.” (P. 94.)

The injury which the head had sustained in these cases consisted, in twenty-three, of fracture or fissure of the cranium, in all compound, with the exception, perhaps, of two, where the circumstance is not stated. In ten, the osseous covering of the brain was neither fractured nor fissured, but there was always wound of the scalp. The morbid appearances within the cranium were various, and sometimes none were detected. In short, the only circumstance these thirty-three cases have in common is a wound of the soft parts.

“The general course of these cases seems to have been this, and in the great majority, twenty-four, it is so stated, that the patient for some time did well, having recovered his consciousness,

where this had been lost, (which was frequently not the case,) was free from fever, and the wound suppurating kindly; that afterwards unfavorable symptoms took place, consisting of fever, rigors, nausea and vomiting, delirium, yellow colour of the skin, and sometimes, shortly before death, pain in the right hypochondrium, or affection of the chest. There was some difference in the period at which these symptoms appeared; but, of nineteen cases, the earliest of which was the seventh, and the latest the twenty-fourth day, the average was between the thirteenth and fourteenth day after the accident. The average period of the fatal termination of the same cases was between the twenty-second and twenty-third days; the earliest being on the fifteenth, and the latest on the thirty-seventh, subsequent to the injury. In one instance, not included in the above number, the patient did well until the eighth day, when, on an attempt being made to remove a portion of bone adhering to the dura mater, general disturbance took place, and death in a few days. In another exception to the more ordinary periods, the same event occurred four months and a half after the receipt of the injury." (P. 96.)

In concluding this part of the subject, Mr. Arnott thus states his opinion :

" I think it will appear that abscesses and inflammations occurring in the viscera of the abdomen and chest, after injuries of the head, present a resemblance to similar affections succeeding to wounds of other parts of the body, sufficient to justify the inference that they arise from the same cause. That cause, I ventured to suggest, might be inflammation of the veins, the consequent production of pus in their cavities, and the entrance of this into the circulation; and, in accordance with this view, we find that, in the only cases in which the state of the part is described, (No. 21, from Schmucker, and No. 32, which occurred in St. Thomas's Hospital,) inflammation of the superior longitudinal sinus existed, its cavity, in both instances, containing purulent matter; in the one, with a firm, fibrinous coagulum, and in the other, with a layer of organised lymph on its inner surface. But we need not confine ourselves to inflammation of the sinuses within the cranium in cases of this description. It must be evident that this process taking place in the numerous veins which ramify between the two tables of the skull, and in those distributed to the soft parts externally, will be attended with similar consequences to those which succeed to phlebitis in other parts of the body." (P. 97.)

Affections of the viscera, joints, eye, cellular substance, and skin, after labour.—In examining the bodies of women who died after parturition, of (as it was supposed) inflammation of the uterus, various pathologists have stated that they found pus contained in the veins of that organ. It is but lately, however, that this subject has attracted especial attention; and certainly the facts which have been brought

forward are highly interesting, and calculated to make us doubt the accuracy of opinions long entertained respecting the pathology of various maladies incidental to puerperal women.* Abundant evidence might be adduced to show that inflammation and suppuration of the veins of the uterus are followed by various secondary affections. Mr. Arnott offers sufficient proof that a violent and destructive disease of the joints takes place in the puerperal state. Dr. MERRIMAN has seen such cases, none of which terminated favorably.† Upon one point we do not altogether agree with Mr. Arnott. He states, "Upon the connexion of this affection of the joints in puerperal women with inflammation of the veins, there is an appearance of direct evidence in two cases related by Velpeau, in his paper on *Phlegmasia Alba Dolens*, although the description is somewhat incomplete." M. Velpeau adduced these cases to show that *phlegmasia dolens* depends on inflammation of the veins. The disease which he describes has, however, little, if any, resemblance to *phlegmasia dolens*; and, even if it had, the cases he relates would not strengthen his doctrine; for of one he states that the internal tunics of the veins were healthy, and even pale; and again, "*lex vaisseaux eux-mêmes n'offraient aucune alteration appreciable de leurs*

* M. Dance relates eleven cases of inflammation of the veins of the uterus, with the appearances post mortem. In several of these instances there was extensive disorganization in remote parts of the body, such as the lungs and joints. (*Arch. Gén.* Dec. 1828, and Jan. Fev. 1829.) Dr. Robert Lee has detailed one case, and incidentally mentioned four others which occurred in his practice in September 1827, of inflammation of the spermatic veins and sinuses of the uterus. (*Med. Gazette*, Feb. 1829.) An interesting case is given in our Journal for May 1829, p. 420, from *La Lancette Française*, of inflammation of the womb, with considerable deposition of pus in the ovarian, right iliac and inferior cava veins. Blandin mentions a fatal case of inflammation of the veins of the uterus, after a ligature had been applied to a polypus of that organ. Baillie observes that "inflammation of the veins of the uterus often advances to suppuration, and the pus is generally found in the large veins of the womb. (*Morbid Anat.*, Wardrop's edit. vol. ii. p. 322.) Meckel, Ribes, Chaussier, and Schwilgné, have each published cases of inflammation of the uterine veins, and it appears probable that it is because the veins are inflamed, and contain pus, that puerperal fever, as it is called, is so frequently and quickly fatal.—REV.

† After having related many interesting cases, M. Dance comes to the following conclusions upon this subject: 1st. That the joints of puerperal women are frequently attacked with inflammation, which quickly runs into suppuration. 2d. That such local affections ordinarily occur during the course of uterine phlebitis. 3d. That the progress of these affections of the joints differs from articular rheumatism, although some similarity may be observed between them. The attacks of the joints in puerperal women commences suddenly, and almost always quickly terminates by suppuration. One joint being affected, the inflammation does not suddenly attack other parts, as is frequently the case in rheumatism. (*Arch. Gén.* Dec. 1828, p. 491.)—REV.

tissus." Neither in the second case have we any evidence of inflammation of the veins.*

The last circumstance to which Mr. Arnott alludes is the occurrence, in the puerperal state, of a disease of the eye, similar to that which took place in one of the cases he relates, from inflammation and suppuration in the vena saphena. Upon this subject an excellent paper has been published by Dr. MARSHALL HALL and Mr. HIGGINBOTTOM, in vol. xiii. of the Transactions of the Med. Chir. Society. In all the cases, six in number, five of which came under their own observation, the affection of the eye took place in from five to eleven days after delivery. It was preceded and accompanied by serious indisposition, in every instance terminating fatally, and under symptoms of extreme exhaustion. Mr. Arnott has the merit of first elucidating the pathology of this curious affection.

In conclusion, Mr. Arnott believes, from the facts he has himself witnessed, and from evidence which he has collected from the best authorities, that the inflammations and abscesses of the extremities or of the head, or after the process of parturition, are attributable to the existence of phlebitis in the part of the body primarily affected.

"In concluding these remarks, the object of which has been to point out the relation between the primary and secondary affections in phlebitis, and to establish the introduction of pus, or other inflammatory secretion, from the surface of the vein into the circulation, as the cause of the latter, I have not felt myself called upon to advance any opinion as to the manner in which this cause operates in giving to some of the secondary affections their peculiar characters: I allude more particularly to the depositions of pus and lymph, unattended by those changes in the texture of the parts which usually precede the production of these fluids. I think it right, however, to state, that I must not be considered as regarding the matter so deposited to be actually that which has been brought into the circulation from the inflamed vein or veins. The disease of the eye, in which pus is not deposited, and the affection of the joints, exclusive of other considerations, clearly prove that the question is no longer one of a translation of matter merely, but one which involves the very difficult subject of the pathology of the blood; especially the share which diseased changes in this fluid have in the production of those phenomena which we are in the habit of comprehending under the term of inflammation." (P. 122.)

We have no doubt of the soundness of Mr. Arnott's doctrine, and those who are inclined to pursue the subject

* Recherches et Observation sur la Phlegmatia Alba Dolens. Par M. VELPEAU. (*Archives Gén.* Octobre 1824.)—REV.

will find it amply confirmed and illustrated by numerous cases, and apparently solid arguments, in various communications by Dance,* Bouilland,† Ribes,‡ Breschet,§ Blandin,|| and other French pathologists. To some of these writers, indeed, Mr. Arnott has referred.

We trust that at some future opportunity Mr. Arnott will complete the subject he has so ably commenced, by discussing the *treatment* required in the various species of phlebitis. We feel convinced that the more strictly the subject of venous inflammation, and *its consequences*, is examined, the greater reason shall we have for believing that many diseases, the nature of which is at present confessedly obscure, depend on a vitiated state of the blood, from the entrance of pus or other products of inflammation into the general circulation. The humoral doctrine is almost entirely exploded from the creed of modern pathologists; but surely Mr. Arnott has made out a case which must convince the most pertinacious solidist that he will sometimes find the first link of the morbid chain in a depraved state of the fluids.

We are much indebted to Mr. Arnott for this highly interesting work. Until the publication of it, the student would have sought in vain for any satisfactory exposition of the pathology of venous inflammation: for, although the subject has been incidentally touched upon by many writers, it has never been before considered with the ability and attention it merits.

A Treatise on Syphilis; in which the History, Symptoms, and Method of Treating every form of that Disease, are fully considered. By JOHN BACOT, Surgeon to St. George's and St. James's Dispensary, and lately Surgeon to the Grenadier Regiment of Foot Guards.—8vo. pp. 280. Longman and Co. London, 1829.

So many and such conflicting doctrines have been broached within the last few years respecting both the nature and treatment of syphilis, and so confidently has each advocate maintained the solidity of his own views, and the efficacy of their application to practice, that they who have not opportunities of forming opinions for themselves must be much at a loss to determine upon what principles they are to act

* Archives Générales, Decembre 1818, and Jan. Fev. 1829.

† Revue Med. Avril et Juin, 1825.

‡ Idem, Juillet 1825.

§ Traité des Maladies des Artères et des Veines, tome ii.

|| Journal Hebdomadaire de Médecine, 28 Mars, 1829.

in the management of venereal complaints. One surgeon tells us that scruple or half drachm doses of calomel are necessary; another assures us that an occasional grain or two of blue pill is amply sufficient; and a third rejects the use of mercury altogether, and is almost inclined, with FALLOPIUS, to regard it as "omnium curationum acerbissima."

Notwithstanding, then, the labour and ability which have been expended upon this subject, it would be absolutely impossible for a student to come to any general and satisfactory conclusions by the assistance of any work which has been hitherto published in this country. There are, we grant, many valuable papers which might instruct him upon particular points of doctrine and practice; but a compendious and impartial view of the whole of the subject was yet to be desired.

We perused with much satisfaction and improvement the neat practical lectures of Mr. BACOT upon the subject of Syphilis, which were recently published in the "London Medical Gazette," and, as we anticipated, they have attracted sufficient attention to induce the author to present them to the profession in a more convenient form than that in which they originally appeared. The present volume is a reprint of these lectures, with many alterations and additions. It gives, in one view, the result of the opinions of most of the principal writers on syphilis, and will enable the reader to determine as to the justice of the peculiar views entertained by Mr. CARMICHAEL and others, as well as of those opinions respecting the non-mercurial plan of treatment, advocated so freely in this country of late years.

The first chapters we shall pass rapidly over: they contain an amusing sketch of the history of the disease, from its earliest origin, and a survey of the fluctuating opinions that have, at different periods, each lived their little day, both in relation to the nature of the disease and the best mode of subduing its severity; together with an enumeration of various remedies, that at first were thought to possess every virtue, and now are known to be at best but useful auxiliaries. Many of them, indeed, are now altogether expelled from our therapeutic catalogue.

Mr. Bacot very judiciously ushers in his work by the undeniable truth, "that never, since syphilis became an object of professional inquiry, has there been a period when some positive and determinate doctrines were more imperatively called for than the time in which we live." Let

us turn to the recorded opinions of modern writers : what do we find? By one we are taught that there are three or four venereal diseases; by another, that scarcely any thing but pseudo-syphilis is now to be met with; by a third, that there neither is nor ever has been such a disease in existence. We have already shown that the same discrepancy exists as to the treatment of the disease.

Mr. Bacot does not consider the name by which a disease is designated as a matter of much importance. Nor is it, provided always we are agreed as to the precise value and signification of the term employed. The term syphilis is here generally employed to denote the primary affection; the constitutional symptoms are included under the denomination of secondary syphilis. "For the sake of varying the expression," Mr. Bacot occasionally speaks of the "venereal disease, or lues venerea: still this latter phrase appears to be too vague and general." We may just observe, that the euphony of a sentence is too dearly purchased by the employment of a confessedly indefinite expression.

Having brought down his historical sketch of the disease to the writers of the middle ages, the author trusts he has convinced the sceptical that there is really no well-founded reason for believing that any disease generally affecting the constitution, or tending to the destruction of the patient, was known to the Greeks, Romans, or Arabians, as the direct consequence of connexion between the sexes. In our opinion he satisfactorily shows that the origin of syphilis must be referred to the latter years of the fifteenth century, and that there are sound reasons for doubting the commonly received opinion of its American origin. Excepting in the rapidity of the march of the disease, the principal features were the same in the early part of the sixteenth century as at this time. They are mitigated in severity, but in kind they remain unchanged.

WISEMAN was the first author who observes, from his own experience, that it often happens some men will be infected, whilst others shall escape with impunity, from the embraces of the same woman. "I have known," he says, "twenty men lie with one and the same woman the same day, and only one of them affected, though the rest equally deserved it." This very sensible practitioner was also particular in directing venesection before the commencement of the mercurial treatment. He believed that by this means, assisted by purging, the remedy is better borne and more efficacious.

The absurd notions which existed, and the dangerous practice which was consequently adopted, towards the close of the seventeenth century, render it easy to imagine the number of victims such treatment must have produced; "and we may very well comprehend the horror with which the pox was regarded in those days, and why it was made use of as one of the bitterest imprecations; since it would appear to have been almost impossible to escape either mutilation or death from the disease or the remedy." At this period there were, however, some practitioners who entertained opinions relative to syphilis more in conformity with the views which have lately caused so much discussion in this country.

"Of these, David Abercrombie is the most remarkable: he published a short dissertation on syphilis in 1684, in which he condemns mercury entirely, and declares that the vegetable remedies are alone sufficient to effect the cure of nearly every form of the disease, though he admitted the necessity of occasionally employing mercurial pills: but later in life he seems to have changed, or at least modified, his opinions very much, and contents himself with recommending the substitution of the *mercurius dulcis* for the mercurial inunction, and restricts his censures of the mineral remedy to the condemnation of salivation in patients of certain habits and constitutions." (P. 37.)

In the early part of the eighteenth century, this milder method of giving mercury obtained many advocates. Warm discussions, of course, arose between these practitioners and the favorers of the older doctrines. BOERHAAVE was greatly influential in bringing the profession to a more just and temperate appreciation of the powers of mercury. He placed much confidence in the decoctions of sarsaparilla and guaiacum. VAN SWIETEN, MORGAGNI, and others, entertained similar opinions. The latter eminent authority indeed observes, "When I went to Bologna, as a young man, both the external and internal use of mercury was nearly deserted, and I never heard of its being used during the eight years I remained there, either one way or other, in the treatment of the venereal disease." Still there are repeated proofs that, in the first half of this century, the practice in this disease was very far from settled. Sir Wm. FORDYCE advanced very closely to the mode of practice advocated and employed by many surgeons of the present day; but yet at that period his experiments made but little impression upon medical men in general, "for we are told by Mr. Bromfield, almost at this very time, that he never saw a single instance in which the sarsaparilla cured the venereal disease without the assistance of mercury, either

given with it or taken previously; and Mr. Pearson remarks that his own observations coincide entirely with those of his predecessor."

From the not unfrequent obstinacy of the disease, however, even when mercury was employed, and from the evils that this remedy itself produced, other curative agents were still sought after. Opium, cicuta, and the nitrous acid, may be especially named. The first and second appear to have only a palliative power, but the nitrous acid has a stronger claim upon our attention.

"One of the reasons that contributed to support the reputation of this remedy, was the obvious effect it had in producing inflammation and swelling of the gums, and, as mercury possessed a similar power, many theorists imagined that the medicinal effects of both remedies were the same; and hence arose the hypothesis that mercury owed its curative powers to the oxygen contained in the majority of its preparations." (P. 40.)

In spite of all the efforts made by surgeons, at various periods, to supersede the employment of mercury, its supremacy was thoroughly established at the close of the eighteenth century.

"It was given indiscriminately for every breach of surface on the genitals; scarcely could any cutaneous affection escape the suspicion of a syphilitic origin; nocturnal pains were generally condemned to inunction, without mercy or discrimination; and the state of the venereal wards of our public hospitals will not easily be forgotten by those who are old enough to have witnessed the disgusting details they afforded: nay, I am sorry to observe that this evil has scarcely been abolished entirely in our own days." (P. 41.)

The labours of Mr. HUNTER obviously led the way to much that has been more fully developed by others: his researches into the nature of the venereal poison, his original notion of certain affections resembling syphilis, as well as numerous other novel and ingenious ideas scattered throughout his work, evince the original and comprehensive mind of that great man. Mr. Bacot is, however, compelled to admit that John Hunter's work has many and serious faults.

"There is, however, yet another writer whose labours demand a little of our notice, though (by a fatality which is often observed, and not to be accounted for,) his work made but little impression on the public mind, and seems now to be almost forgotten: I allude to Dr. Clutterbuck's pamphlet, published in 1799, and entitled 'Remarks upon some of Mr. J. Hunter's opinions on the Venereal Disease.' The most remarkable passages of this work relate to the belief of the possibility of curing many forms of the

venereal disease, not only without mercury, but without medicine of any kind; or, in plain language, admitting that they might undergo a spontaneous cure. Thus it may be seen how very nearly this gentleman advanced to the conclusions which have since been the result of direct experiment; and that, in fact, as a late excellent writer has remarked, he may justly claim the merit of having distinctly pointed out to us that the mere circumstance of a disease giving way and being cured without mercury, is no proof that the case is not venereal " (P. 44.)

The third and fourth chapters are principally devoted to an examination of the writings, and a detail of the opinions, of authors of the present day. The Peninsular war opened to the medical officers of the British army new views relating to syphilis, and they quickly communicated the information they acquired. Mr. FERGUSON first published the results of his experience in Portugal. It appears evident that this gentleman considered the conclusions to which he arrived as totally inapplicable to this country, though true as far as they regarded the natives and climate of Portugal. The facts we obtain from Mr. Ferguson are principally the following:

" It was customary among the native practitioners in Portugal to cure all primary venereal affections with topical applications only; the native soldiers, as well as those in civil life, were accustomed to perform their duty, and follow their usual avocations, with sores on the penis, not merely such as were of a trivial nature, but such as made Mr. Ferguson shudder to look upon; the only difference in the treatment adopted by the military and civil practitioner in such cases being, that the latter generally combined the decoction of the woods with the local remedies; but in both instances the use of mercury was reserved for those in whom the bones had become affected, when a very small quantity, usually of calomel, was prescribed, together with Dover's powders, warm baths, and other sudorifics. Dreadful examples of mutilation did, indeed, sometimes occur; but these bore no proportion to the number of those who had suffered from the primary symptoms of the disease; and the affections of the bones, when they did occur, were usually slight; thus proving that, in this climate at least, the complaint had become so much mitigated as to run generally a mild course, until it at length exhausted itself spontaneously.

" Very different, however, was the progress of the symptoms in the British army: among the soldiers its ravages were so frightful that Mr. Ferguson says it is probable that more men had sustained from this cause the most dreadful of all mutilations, during the four years the army had been in Portugal, than the registers of all the hospitals in England could have produced in the last century; so that not only were the primary sores more intractable to mercury than in England, but also secondary symptoms made their

appearance in no small proportion, even whilst the constitution was actually under the influence of mercury." (P. 46.)

Mr. ROSE next gave his assistance to the elucidation of this interesting subject. The results of his experiments in the hospital of the Coldstream Guards, during a period of nearly two years, were published in 1817. In this publication Mr. Rose announced that he had cured *all ulcers* on the parts of generation, as well as the constitutional symptoms to which they gave rise, *without* mercury. Some of the cases might not have been syphilitic, but the majority of them were so without any doubt.

Mr. GUTHRIE also confirmed the statement that *all ulcers* indiscriminately may be cured without mercury. He observes, however, that, in many of these cases, the cure was very tedious, and the cicatrices of the sores were frequently giving way. The secondary symptoms were mild, but tedious to cure. Mr. Guthrie contrasts the result of his practice with mercury whilst surgeon to the 29th regiment, between 1801 and 1809; and he remarks that, during this period, when his patients generally underwent a moderate course of mercury, he very seldom had a case of secondary syphilis. From the non-mercurial treatment, the average number of cases of secondary symptoms was at first stated to be one in ten, but Mr. Bacot believes that one in four or five would have been more correct.

From the statements of the writers above named, and many others referred to by the author, it appears to be fairly deducible,

"1st. That all sores of the genitals, without exception, are curable without mercury. 2dly. That secondary symptoms occur in the proportion of at least one in ten of those cases where no mercury is used; whilst, on the contrary, the proportion of such cases is only as one to seventy-five where that remedy has been employed. 3dly. The possibility of curing nearly all the forms of the secondary syphilitic symptoms without the assistance of a particle of mercury. 4thly. The mildness of these symptoms, which, excepting in about half a dozen instances, were confined to eruptions in the skin and ulcers in the throat. 5thly. That the period required for the cure of the primary sores by the non-mercurial plan was not in general greater than where mercury was employed; though it is admitted that the cicatrices of the sores remain frequently in a state of disease, often ulcerating again, and that the secondary symptoms, though not violent, were very tedious, and, when apparently cured, would not unfrequently recur again and again." (P. 55.)

These are doubtless very important conclusions, but they are modified by the following sensible remarks of Mr. Bacot.

"The experience of a few more years, whilst it has left the facts above cited untouched and uncontradicted, has amply shown that the proportion of secondary symptoms, as well as their obstinacy, the slowness and uncertainty with which primary ulcers heal, and their frequently breaking out again under the non-mercurial system, rendered it highly inexpedient, and in fact impossible, to introduce this practice into general use: nay, more, in several instances, even among the military, little accustomed to regard consequences, it began to excite uneasiness; the proportion of cutaneous affections, of ulcered throats, of pains in the larger joints, and other concomitant symptoms, became a serious evil, and induced many regimental surgeons to remodel their practice, and to adopt a plan of treatment less exclusive with regard to mercury.' (P. 55.)

The facts proved by the non-mercurial treatment are, however, valuable in many respects. They show that we may safely and advantageously dispense with the use of mercury, where it disagrees with the constitution. If fever arises, or local or general pains are induced, we may patiently wait for a more favorable moment for exhibiting the medicine. We may apply to ulcers on the genitals the same principles of cure which would apply to sores on any other part of the body. If the patient is prone to struma, we may forbear its use.

"Or, when necessary to do so, we may prescribe it either in so mitigated a form, or under such combinations, as to disarm it from all those dangers which occasionally render its exhibition a cause of more real suffering than the disease itself; and yet let me not have it imagined that I am one of those who recommend the exclusion of mercury from practice in the venereal disease: on the contrary, it is my object to prove that in the vast majority of cases it is our sheet-anchor." (P. 60.)

From the time of Mr. Hunter's publication, a new page of our history may be said to be opened. Until then syphilis was not doubted to be one disease, and all the variety of symptoms were attributed to one poison; but from that date a new host of diseases were admitted into the catalogue of human woes. These were said to resemble lues in appearance and progress, but yet they were thought not to be syphilitic. To this subject Mr. Bacot next turns his attention. It is, in truth, the foundation upon which Mr. Carmichael has built his theory of a variety of syphilitic poisons. It must be observed, that much of the reasoning employed by Mr. Hunter, and subsequently by Mr. Abernethy, has now fallen to the ground, since the fact of all forms of primary ulceration being curable without mercury

has been admitted; for all their distinctions rest upon the converse of that proposition.

Mr. Bacot speaks in high terms of Mr. EVANS' work on Ulceration of the Genitals. He has no hesitation in saying that Mr. E. has done more than any other writer towards discriminating those sores which are the produce of impure connexion, from those which are not so. Mr. Evans is, however, an advocate for more than one kind of venereal disease. In the very outset, indeed, he draws the same distinction as Hunter and Abernethy had previously done; a distinction which does not in reality exist. All that Mr. Evans enables us to assume is, that *it is possible* to ascertain clearly and distinctly certain forms of ulceration, which are not the produce of impure connexion; and, moreover, his observations go far to show that sores, not being so produced, are not followed by constitutional affections.

Mr. Bacot examines the opinions of Mr. CARMICHAEL with much attention, and enters his protest against their accuracy; for he cannot acknowledge more than one venereal disease. Mr. C., on the contrary, professes to have traced several distinct morbid poisons to their source, and to point out also the consecutive symptoms belonging to each. Without presuming to settle such a question by the intervention of our dictum, we must be allowed to say that we agree perfectly with Mr. Bacot upon this point. The doctrines of Mr. Carmichael are plausible and ingeniously put, but, in our judgment, they do not stand the critical examination to which Mr. Bacot has submitted them. From the experience of Hennen, Rose, Guthrie, &c., as well as from his own observation, it appears to the author that it is not possible, at present, to form more than one or two general conclusions, "the principal of which appear to be, that the papular is by far the most common form of all the eruptions met with in syphilis; that the sloughing sore, in its most acute form especially, is often unattended by any form of secondary symptom; and that the tubercular eruptions are very often the result of the inadequate exhibition of mercury."

"I am led to conclude that, in the present state of our knowledge, we cannot give any satisfactory answer to my third query: that is to say, we are not able to trace, with certainty or regularity, distinct forms of constitutional affection to distinctly marked forms of primary ulceration; and this leads me to believe that there is one venereal poison only, and that the variations we observe in the symptoms, both locally and generally, arise from difference of habit, difference of treatment, perhaps from different

stages and conditions of the virus itself, and from many minute and undefined circumstances with which we are at present unacquainted. Moreover, it is equally clear to me that, if we are to restrict the employment of mercury to that sore in which all the characters of the Hunterian chancre are united, we should have very few opportunities of employing it at all, but should continue to be disgraced by a succession of secondary symptoms, which the more frequent and judicious employment of that medicine would most assuredly prevent." (P. 79.)

In the ensuing chapter the nature and effects of the syphilitic poison are considered. The poison of syphilis is one, *sui generis*, affecting the human race only, and subject to laws differing materially in many respects from those which regulate other morbid poisons; among which differences, that of being communicated an indefinite number of times is not the least considerable. Mr. Hunter justly remarked, that we know nothing of the nature of the venereal virus. Its effects we are too well acquainted with. There are some respectable authorities who believe that the constitution may become affected without any previous breach of surface, from a bubo solely, or by the communication of the secondary symptoms from one person to another, merely by their sleeping together in the same bed. Mr. Bacot relies but little upon such statements: he is inclined to believe that some deception may have misled the surgeon, to which in such cases there are often such obvious and powerful motives.

He is of opinion that, although the doctrine of the identity of gonorrhœa and syphilis is not to be acceded to in its fullest extent, those who have supported it have more reason upon their side than might be at first supposed.

"Thus I am inclined to believe that, although the vast majority of cases of discharge from the urethra, attended with pain in making water, which are the consequence of sexual intercourse, and have therefore the common name of gonorrhœa applied to them, are, in truth, merely local affections of different degrees of intensity and duration, depending much upon the peculiar temperament of the person affected by it, and other accidental causes; yet still I acknowledge the existence of a species of gonorrhœa to which the term of venereal, or syphilitic, has been applied; and I further believe that this species may lead to ulcerations of the throat and palate, to ophthalmia, to eruptions, to swellings and pains in the joints, and, finally, to affections of the periosteum and bones." (P. 90.)

Mr. Bacot takes a brief survey of the opinions of various authors upon this subject. The following remark, he observes, which has been made by Mr. SAWREY, cannot be

well replied to: "If in any *one instance* the inoculation of gonorrhœal matter has produced chancre, there is an end to the question." SWEDIAUR declares that he has seen several examples of ulcers in the throat, and other evident symptoms of lues, appearing in consequence of a blenorhagia, (i. e. gonorrhœa,) without there having been the least appearance of chancres either on the thighs or genital parts. Mr. Bacot has himself seen more than one unequivocal example of ulcers in the throat, eruptions on the skin, ophthalmia, and even affections of the periosteum, following gonorrhœa only. He also states he knew many cases where patients affected with blenorhagia, without any ulcer, communicated chancres, and reciprocally. A prostitute sometimes gives one man a clap, another chancres, and a third both at once.

"Thus far Dr. Swediaur's facts go to establish this position, and he next endeavours to explain why it is that mercury is not necessary for the cure of a clap, and how it happens that secondary symptoms so seldom follow this form of the complaint: this he believes to be owing to the structure of the parts, as well as to the internal surface of the canal being defended by a quantity of mucus, by which the virus is much diluted, the sides of the urethra are defended, and consequently the formation of an ulcer prevented. He might also have added, that nine cases out of ten of discharge from the urethra are not really cases of syphilitic gonorrhœa." (P. 97.)

VIGAROUS and LAGNEAU, men of extensive experience and careful observation, confirm the above arguments. To rebut this evidence, we have only the experiments of Mr. BELL; and Mr. Bacot is, we think, justified in asserting that, if they were twice as numerous, they would not be sufficient to overthrow the positive testimony of so many writers of credit and authority.

It is of evident importance that the surgeon should bear in mind that many, or perhaps all, the symptoms of gonorrhœa may arise from other causes than impure connexion. Female children are often affected with a severe discharge from the pudenda, which is very obstinate. We have seen many examples of this kind.

"In the instance of adults of either sex, it is, however, obviously impossible in every case, or indeed in most cases, to form an opinion as to what discharges may be followed by after consequences, or to distinguish them from those that will not: the mere intensity of the symptoms is not always a safe criterion to judge by. All, then, that we are enabled with certainty to say is this, that it is possible to pronounce on many occasions that a gonorrhœa is not venereal: thus, for example, if a discharge came on a

few hours only after connexion, if it has continued several days without inflammatory symptoms, if the patient has been liable to some discharge after any excess either of venery or of wine, in all such cases the probability is that the patient labours under some other diseased condition of the urethra, and that, though the intercourse of the sexes may have been the exciting cause, still there may be no imputation upon the cleanliness of the female; and the same rules will apply with still greater force to females, who are so subject to discharges from many causes unconnected with the commerce of the sexes." (P. 101.)

The symptoms of gonorrhœa are accurately described, as they occur in the male and female.

"The cure of gonorrhœa is to be undertaken upon the principle of subduing severe inflammatory action, reference being had to the nature and functions of the part affected. If the patient, as sometimes happens, suspects the probability of his having received the infection, and carefully watches his feelings, he is often enabled to notice the uneasy sensation at the orifice of the urethra, and a slight turgescence of the lips, for some hours before any increased secretion is discovered; sometimes even for a whole day previously. Should he in this condition apply for relief, it is more than probable that the use of an astringent injection, so as to produce some irritation of the internal membrane, will altogether supersede the disease. This I have effected in numerous instances, and with one precaution the practice is as safe as it is often efficacious. In those cases of incipient discharge, where there is no pain or scalding in making water, this plan may also be had recourse to, with the almost certain effect of suppressing the discharge often in forty-eight hours, or even less; but it must be remembered that, in either case, if the employment of the injection the first or second time produces great pain, and that the heat in making water is rendered much more severe, the injection must be directly abandoned." (P. 111.)

The injections considered most effectual for the purpose above mentioned are either two grains of sulphate of zinc to an ounce of water, or about a grain to the ounce of the sulphate of copper. Mr. Bacot speaks very cautiously respecting the practice recommended by some surgeons of employing a strong solution of lunar caustic as an injection. In irritable habits it will act with great violence, and produce much mischief. We have a friend at this moment confined to his bed with violent and even hazardous inflammation of the penis, brought on by this improper and unjustifiable treatment.

The personal experience of Mr. Bacot does not enable him to commend the copaiba as a remedy in the first few days of a virulent gonorrhœa. The cubebs he does not

estimate above other plans of treatment. In aggravated gonorrhœa, rest is considered absolutely necessary. We are confident that a want of attention, or rather the utter neglect of this precaution, in ordinary practice, is the cause of most of the severe and intractable symptoms which so frequently distress the patient and perplex the surgeon. Local bleeding is frequently necessary. Cupping from the perineum is preferred to leeches; the latter often produce irritation of the skin, œdema of the prepuce, and phymosis. Free purging in gonorrhœa is improper. When the most urgent symptoms are allayed, the author then employs copaiba or cubebs.

Untoward circumstances occasionally arise. For example, the scalding sometimes continues when every other symptom has given way. "I have seen this amount to a very serious evil, and have frequently witnessed the difficulty attending its removal. I think the use of muriatic acid, four drops to four ounces of water, used as an injection, has succeeded better than any other remedy, either external or internal, that I am acquainted with, in controlling this symptom."

When, after the employment of free bleeding, the inflammatory symptoms of swelled testicle still continue to linger, the tartar emetic will be found an excellent remedy. "The mode of administering the tartar emetic is in a mixture containing two, three, or four grains dissolved, with the addition of an ounce of Epsom salts, in six or eight ounces of water: of this mixture the patient is directed to take two or three tablespoonsful every half hour, or oftener, until vomiting is excited; after which the dose is repeated at intervals of three, four, or six hours, according to circumstances."

In mild cases the vinum colchici, in small doses, has been found serviceable. Many surgeons object to the employment of injections, and condemn them as productive of stricture and other diseased conditions of the urethra; "but these are groundless apprehensions."

We are compelled to pass over many other good practical remarks upon the primary and remote consequences of gonorrhœa.

In the next chapter the primary symptoms of syphilis are considered. The term chancre is now almost discarded from our vocabulary: we are contented to call the primary affections on the parts of generation by the name of ulcerations, adopting a distinctive epithet to them, such as is afforded either by their appearance or situation. To this

change Mr. Bacot does not object. The word chancre is unscientific in its origin, and useless in its application: it implies, in fact, a cancerous sore. No definite description can include all the forms and species of syphilitic ulcerations. With the exception of one circumstance only, an inaptitude to heal, they may present every variety of appearance which a breach of surface may be supposed to assume. "Generally speaking, there will be a considerable difference in the activity of the poison, according as it has been applied to the cutis, to the cuticle, or to the glans itself. Ulceration will take place earlier in the latter situation, and latest of all on the skin of the penis." In some cases, the poison appears to have been inactive for three or four weeks. Mr. Hunter relates two instances of a still more tardy infection. In one case, seven weeks elapsed before the chancre made its appearance; in the other, two months. Most commonly it begins to exert its power within a week or ten days after connexion. The first appearance of a syphilitic ulcer, according to the united testimony of all writers, both ancient and modern, is in the form of a pimple or small pustule, whenever it has been traced to its commencement. This fact Mr. Bacot urges as a strong argument in favor of the unity of the syphilitic poison.

"It may be generally admitted that hardness is an accompanying mark of all syphilitic sores; that they also usually put on a figure approaching to the circular, and are not necessarily attended with much surrounding inflammation and pain, though they are liable to be attacked by it, and then their sensibility becomes greatly augmented: but there are also a few diseased appearances to which the parts of generation are liable, which it may be as well to endeavour to distinguish from the different forms of syphilitic ulcerations. These are chiefly excoriations, herpes either of the internal prepuce or of the cutis itself, common phlegmonous boils, or small aphthous-looking ulcerations occurring in clusters; and most of these may come on independently of sexual intercourse, though it is obvious that few men are able positively to assert that this is the case; and hence arises the alarm which any breach of surface on these parts immediately occasions. Excoriations most frequently take place in those persons who have the prepuce long, and where cleanliness is not strictly observed, and the natural discharge from the parts is in great quantity." (P. 151.)

Some men rarely have connexion without its producing a slight breach of surface; but the characters of these excoriations will not be mistaken for syphilis.

"Another description of sore is sometimes met with more particularly round the corona glandis; that is, very minute aphthous-

looking points, which are sometimes in clusters, and at others extend around the whole of the glans; some will heal whilst fresh ones break out. They are totally devoid of pain, and are best got rid of by the application of the lunar caustic, or a wash composed of the acetate or sulphate of copper in proper proportions. I have known these appearances last a considerable time, but they are not certainly followed by any constitutional affection, and may be trusted entirely to local applications of the stimulating kind." (P. 153.)

The appearances of the gangrenous, sloughing, and apthous ulcers, and of the raised ulcer of the prepuce, are minutely described, and their appropriate treatment pointed out.

"In the administration of mercury one precaution is absolutely necessary: either perfect confinement to the house, or such care in the exposure to weather, and such precautions against damp clothes or wet feet, or other sudden transitions of temperature as shall be equivalent to it. These are old precautions, it is true; so old, that I am sorry to say they are worn out; and now we meet with people every day who are getting cured of syphilitic complaints, and taking a mercurial pill or two, pursuing their usual business, or (what is still worse) usual debaucheries, without fear of the consequences; but this is a line of conduct which I never would sanction." (P. 161.)

In many of those cases of sloughing sores in which there is no time to wait for the effects of mercury given in the usual way, the mercurial fumigation baths are recommended. Mr. Bacot is inclined to think that the operation proposed for phymosis is seldom necessary, and he would restrict it to those cases wherein the pain and tumefaction are very great, and the ulcerations within are of that highly painful and inflammatory character leading to the gangrenous sore.

The next chapter describes the mode in which buboes occur, their varieties, and treatment. One caution Mr. Bacot particularly inculcates, "never prescribe for a bubo as a solitary symptom, whatever rank of life the patient may be in, without examining the penis, if a male, or the pudenda in the female, if you can possibly avoid it; for patients, under these circumstances, will occasionally deceive if they can, even though it be at the expense of their own health."

Another local affection, if not exactly among primary ones, at least the consequence of them, is the formation of warts.

"They may be snipped off with scissors, or tied with a fine silk; they may be taken off by caustic, or destroyed by the powder of savine, by the liq. plumbi acetatis undiluted, or by the tinctura

ferri muriatis, by a strong solution of oxymuriate of mercury, or by the strong acetic acid; but the extent, description, and mode of attachment of these excrescences should be our guide in preferring one or other of these remedies: for example, if the wart is large, with a small neck, I should cut it off with the scissors, and touch the cut surface with the lunar caustic. This will have a double effect: it will stop the bleeding, and prevent the growth of the wart, for they are all inclined to sprout again. If the mass was of the fungoid kind, I should, on the contrary, dip a piece of lint in the tinct. ferri muriatis, and lay it upon the part, or sprinkle it with the powder of savine; or if it was circumscribed, but still of a soft nature, perhaps I should prefer including it within a ligature; but, whenever the surface from which the warts have grown is extensive, it will be necessary to wash the part for some considerable time afterwards with a strong solution of the sulphate of alumine or zinc, or of the oxymuriate of mercury, which will tend to prevent their reappearance." (P. 193.)

Chap. X. *Constitutional or secondary Syphilis*.—This train, or succession, of symptoms is the consequence of the absorption of the poison, from some breach of surface on the body, or occasionally in consequence of a virulent gonorrhœa. Some very recent writers teach us that, though very rarely, yet still there are cases in which the constitution has been affected without any primary symptom having preceded. Upon this point Mr. Bacot is sceptical; and we agree with him in doubting the existence of any such cases, although a positive denial of such exceptions to the general fact would not be justifiable.

The order in which the various parts of the system are usually attacked by secondary symptoms, is next remarked upon.

"It was, however, formerly thought that no deviation from this regular succession ever took place, but that the progress of the symptoms was uniformly from bad to worse, until the constitution was fairly worn down by the disease; but we are now, on the contrary, convinced, from ample experience, that this is not even commonly the case: that nodes and caries of the bones are comparatively rare; that syphilis can, and does most commonly, exhaust itself upon the first order of parts; and that those terrible cases of diseased bone are more rationally attributable either to the action of the disease on a strumous habit, but more especially to the rash and ill-advised employment of mercury in certain peculiar constitutions." (P. 198.)

The time which usually elapses before the appearance of secondary symptoms, is the next subject of consideration. It is certain that, within six weeks after the occurrence of the primary sores, or even before they are healed, the pa-

tient's health will often begin to fail. Nocturnal pains come on, and an eruption quickly follows; but this Mr. Bacot believes chiefly takes place where no mercury has been exhibited. If that remedy has been employed inadequately, a longer space of time will usually elapse, and from four to six months is by far the most general period. In some cases the action of the virus may be suspended for some time. It must not be forgotten that there are but few of the symptoms of secondary syphilis so peculiarly and exclusively belonging to that disease, that we are at once enabled positively to assert the real nature of every case that comes before us. The abuse of mercury produces many affections that simulate closely those of the venereal disease, and peculiarity of constitution affords many other striking resemblances. To form a correct opinion, then, we must carefully attend to the history of each case.

"A syphilitic sore throat has been described as one unvarying symptom, but it has several varieties; and these varieties, as well as those of the primary sore, and the particular character of bubo, require a modification in practice. It requires also to be distinguished from the sore throat induced by mercury, for which it may be easily mistaken; and this would be a most unfortunate error." (P. 200.)

Of eruptions there are many distinct characters, as the papular, the pustular, the tubercular, which may be considered as the heads of so many distinct classes of eruption. Thus far Mr. Bacot's observations coincide with those of Mr. Carmichael; though he "utterly denies the regular conjunction of either of these peculiar forms of eruption with particular species of ulceration." Mr. B. is moreover "decidedly convinced that the occurrence of any or all of these secondary symptoms may be prevented, in the great majority of instances, by a judiciously managed mercurial course." The expression employed in this sentence, it is true, admits of exceptions to the doctrine inculcated, but still we think the argument is too strongly put: we cannot admit that "the appearance of secondary symptoms is, in most instances, a stain upon the reputation of the practitioner who has had to treat the primary affection," although we are perfectly aware of the occasional ill consequences resulting from the ignorance or negligence of the surgeon who directs the treatment of the disease in its first stages. Have there been, or are there, any surgeons, whatever may be their ability or their mode of treatment, who have not more frequently to contend with secondary symptoms, in cases which they have themselves treated from the com-

mencement, than would be supposed from the manner in which our author has expressed his opinions upon this subject?

The directions given by Mr. Bacot to ensure the efficacy of the mercurial course are highly judicious.

The secondary symptoms are next described seriatim, and a few pages are devoted to the subject of syphilis as it affects pregnant women and infants. That infants are occasionally born with symptoms of syphilis, of too undoubted and well-marked a character to admit of dispute, cannot, we think, be denied by any practitioner of ordinary experience. We confess, however, we have not detected "a peculiar shrill tone of voice" as one of the symptoms of this disease in infants.

The following case is highly interesting:

"A young gentleman, just before he married, had been attended for venereal complaints. Thinking himself safe, he married a beautiful woman, who was delivered of a fine healthy boy at the end of ten months. During her second pregnancy, the husband declined visibly in his health, and, within five months of the second delivery, he had venereal ophthalmia, and a suspicious fungous excrescence round the anus. At the time that the lady was confined, in addition to the above symptoms, the husband had an ulcer at the back of the palate, extending towards the larynx. He then submitted to a course of mercury, and got finally well. During the time that the gentleman was under treatment, the infant's condition excited attention: it was squalid, and full of eruptions scattered from head to foot, and appeared to swallow with difficulty. It could not suck, and was fed upon goat's milk. On the mother not the smallest mark of venereal infection was to be found. The child was cured by rubbing ten grains of the stronger mercurial ointment into the soles of the feet, and continuing this treatment until the symptoms all yielded." (P. 253.)

The concluding sections are occupied by remarks on mercury and its various preparations, and upon the various derangements of health which the use of this medicine so frequently produces. Mr. Bacot joins Mr. Abernethy in extolling the advantages of mercurial fumigations. He believes with him that they are fully capable *alone* of radically curing many of the forms of syphilis. He notices with particular commendation the vapour and fumigating baths established by Mr. GREEN, of Great Marlborough street: they are said to be superior to any thing of the kind even in Paris.

In some cases, mercury fails in producing its proper effects upon the system. In such instances the hints of Dr. JOHN WILSON, in our Journal for June last, upon the

associated use of oil of turpentine and mercury, are worthy of attention.

Our opinion of this work may be very briefly stated. It is decidedly the most practically useful that has yet been published upon the subject of syphilis. We state this confidently; and we are quite sure that they who will peruse it with the attention which we have devoted to it will come to the same conclusion. Mr. Bacot has completely and satisfactorily effected the very laudable object he had in view, of saving the time of the surgical student by presenting him the result of the labours of previous writers, together with many interesting critical comments upon their opinions, which his practical experience and ability so well qualify him to offer. There is an attractive fluency and easiness in the style in which the work is written, which carry the reader along without the fatigue which arises from an application to most books that are worthy of deliberate study.

One omission Mr. Bacot should remedy in a future edition: there is neither an index nor a table of reference, and but few even of the chapters are headed with titles, to inform the reader of the subjects discussed in them.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ANATOMY.

Rare and remarkable Anomaly of the Vascular System.—This case was met with by Professor FRANCHE, and is related in the *Zeitschr. für Natur und Heilkunde*, for 1827.

The aorta was in its natural position, but the vena cava ascendens did not lie on the *right* side of the former vessel: it, on the contrary, ascended over the fourth, third, and second lumbar vertebræ, on the *left* side of the aorta. Opposite to the first lumbar vertebra, the vein crossed in front of the artery, immediately below the superior mesenteric. Having arrived on the right side of the aorta, the vein continued to ascend, as usual, towards the liver and diaphragm. At the point where the vena cava is formed by the union of the two iliacs, and where the aorta bifurcates, the iliac veins were for the most part covered by the iliac arteries; but the former were rather more to the *left* than the latter, corresponding thus with the anomaly of the principal trunks. The aorta was in this manner quite embraced by the vena cava opposite to the lumbar portion of the vertebral column.

The only similar case on record, we believe, is that noticed by MORGAGNI, *De Sed. et Caus. Morb. lib. iv.*—*American Jour. of Med. Sciences.*

Insertion of the Umbilical Vein in the right Auricle of the Heart. By Prof. MENDE.—The child who formed the subject of this case died immediately after its birth, without any known cause. It did not show any anomalous appearance externally; but, the vessels having been injected, a remarkable anomaly was discovered in the disposition of the umbilical vessels. The umbilical vein, instead of dividing into two branches to traverse the liver, continued in the form of one trunk, and ascended over the convex surface of the right lobe of that organ to the right auricle of the heart, where it terminated before and above the mouth of the inferior cava. The heart appeared to be pulled down by this insertion of the umbilical vein; its base was much inclined towards the right and towards the sternum; its position was, consequently, more transverse than ordinary. A single umbilical artery arose from the abdominal aorta, at its bifurcation, between the primitive iliacs; it passed on the left side of the urinary bladder, and continued its course to the umbilicus. No other anomaly was discovered in the abdominal or the thoracic viscera.—*Ibid.* from the *Bulletin des Sc. Méd.*

PHYSIOLOGY.

State of the Heart during Pregnancy.—It is asserted by M. LARCHER, in a paper in the *Archives Générales*, that in pregnant women the left ventricle becomes thicker, more firm, redder, and more active, than natural. This hypertrophy, he says, whether the cause or the effect of plethora, always imparts an energy to the circulation, which accounts for the vascular symptoms of pregnancy.—*Ibid.*

Cyst near the Parotid Gland, containing a Fœtus.—Professor RENNER, of Jena, relates, in the *Zeitschr. für die Organ. Physik.* for September 1827, his having found in a cow, which died of hectic fever, a cyst two inches in length at its greatest diameter, under the skin, behind the parotid gland, which contained the bones of a fœtus.—*Ibid.*

Perspiration after Death.—At a meeting of the Royal Academy of Medicine in August 1828, the secretary read a case which came under the observation of M. SPERANZA, clinical professor at Parma. The subject was a woman of Mantua, who died on the fourth day after an attack of encephalitis. Examined twelve hours after death, the body was still warm and covered with a profuse perspiration, which, as often as it was wiped off, returned again. This phenomenon continued during twenty-four hours. M. FONTANELLE, by whom the case was addressed to the Academy, suggests, in explanation of this occurrence, that the cutaneous capillary vessels still retained a remnant of the vitality proper to them after the cessation of general vitality.—*Ibid.* from the *Archives Générales*.

PATHOLOGY.

Medical Report of the House of Recovery and Fever Hospital, Cork street, Dublin. By JOHN O'REARDON, M.D.

ALTHOUGH we do not deem it necessary to give the whole of this report, there are many pathological and practical remarks contained in it, which result from the extensive experience of Dr. O'Reardon, that it would be improper to pass over. We shall select those which appear the most useful

and interesting, either because they confirm opinions previously entertained, or from their suggesting any novel views.

The chief visceral accompaniments of fever in spring were cephalæa, pneumonia, catarrh, rheumatism, abdominal inflammation, and sub-inflammation; dysentery, and a few cases of erysipelas of the face and head. The last-mentioned disorder, even in its more formidable shape, "I generally or almost universally cure," says Dr. O'R., "by one, and occasionally two, moderate arm bleedings, followed by the use of three or four drachms of cinchona, given in two portions daily, the bowels being at the same time kept free by any of the ordinary cathartics. I find this practice uniformly succeed in cases of alarming tumefaction of the face, eyelids, and integuments of the head, and delirium; although in many of these instances there be a smallness, and a rather discouraging deficiency of strength of the pulse."

Dr. O'Reardon had under his care two patients, one a man and the other a woman, each severely afflicted with a complication of dysentery and melæna. In addition to the usual well-known dysenteric stools, both these persons frequently voided large heavy clots of coagulated blackish blood, of most offensive odour.

"These repeated losses rendered the lips and faces of the patients completely blanched, and caused considerable languor. The skin was in both instances hot, and the pulse was quick and small. I prescribed for each a mixture as follows: R Olei Ricini ꝑv. vi.; Ol. Terebinth. rectificati ꝑij. iv.; Mucilaginis Acaciæ ꝑiss.; Tincturæ Opii ꝑi.; Syrupi ꝑss. Fiat mistura, cujus sumatur pars quarta tertiis horis ad quartam vicem. The prescription was the same for both patients, except that the mixture directed for the man contained a drachm of the Oleum Ricini and a drachm of Oleum Terebinthinæ more than that for the woman. I repeated this remedy daily for three or four days, and again directed the same during two days more with diminished quantities of Oleum Terebinthinæ and Tinctura Opii. By such treatment the melæna was in each patient completely cured, and the dysentery was much mitigated. The latter soon afterwards yielded to two or three doses of Oleum Ricini."

Whatever the sticklers for nosological divisions and refinement may think of the following remarks, they are such as every practical observer will recognise as arising from observation at the bedside of the patient.

"The divisions of fever designated in our classic medical works by the appellations of Synocha, Synochus, Typhus mitior, Typhus gravior or putridus, Febris biliosa, Febris nervosa, and Febris maligna; and which PINEL terms *Fièvre anquietenique ou inflammatoire*, *Fièvre meningo-gastrique ou bilieuse*, *Fièvre adenomeningée ou muqueuse*, *Fièvre adynamique ou putride*, *Fièvre ataxique ou maligne*: all these divisions are, I venture to say, mere variations of one genus, that is, of the above-described general sub-inflammatory condition, constituting fever: varieties produced by the diet, occupation, locality, temperament, habit of body, state of mind, or nervous condition of the patient; or by an alteration in his biliary or other secretions, or by the period of the fever, or its treatment; or by the season of the year, the climate, or constitution of the atmosphere.

"I must likewise include, as species belonging to the forementioned genus, the *Peripneumonia biliosa*, *Peripneumonia putrida*, *Peripneumonia maligna*, *Catarrhus biliosus*, *Catarrhus putridus*, *Catarrhus malignus*, of some authors;

as, in tracing the histories of these diseases in the works of some of the physicians who record them, I find them to be the ordinary kinds of fever, combined, some with catarrh, some with pneumonia, and others with abdominal ailment.

"The varieties of fever in different countries, and in different parts of the same country, are principally to be set to the account of diet, locality, air, and climate. The basis or general plan of treatment ought, I conceive, to be similar in all countries; save that their varieties and changes demand corresponding modifications in the treatment. In unfavorable situations, and very hot oppressive climates, the progress of fever through its stages is rapid, and must necessarily be met by appropriate activity, vigilance, and discernment.

"The above view of fever, which in my mind is that of nature, removes that obscurity and confusion which long prevailed, and in some places still exists, in the management of fever. Though comprehensive, it does not confound any diseases which are naturally separate. It admits and requires the utmost attention in distinguishing the varieties and successive changes of fever, and in discriminating the character of each disordered viscus. It indicates a rational, clear, effective, and tolerably uniform line of practice in the treatment of fevers, and their manifold complications; a practice which the best modern physicians are, for these many years back, gradually adopting, as if it were by common consent.

"This practice consists mainly in the antiphlogistic plan of treatment, modified and varied according to circumstances, and especially according to the character, grade, and period of the fever, its complications, and the patient's pulse and strength.

"Bilious and hepatic symptoms are to be subdued by well-known appropriate remedies, similar to those prescribed for the hospital nurse, whose hepatic disease and recovery are noticed. These are remedies which, so far from being opposed to, are for the greater part in unison with the forementioned antiphlogistic plan. This plan, based, it is presumed, on sound principles, is extensive and varied in its application. It admits of the mildest practice in mild cases, as well as of the most active and efficient treatment in severe cases. It is suitable not only to the diseases above mentioned, but is also applicable to the exanthemata, or eruptive fevers, which require to be treated pretty much on the same principle with common fever and its modifications; but, in the exanthemata, we must be cautious to prevent the disappearance of the eruption before the proper period, and we must be ready to obviate or remedy visceral determinations.

Whatever may be the appearance of fever in its commencement, and by whatsoever title it may be denominated by nosologists, whether synocha, synchus, or typhus, in its advanced state it becomes occasionally marked by adynamic spasmodic nervous symptoms, with a black or blackish tongue, and a very peculiar alteration of countenance; symptoms which supervene on, or take place of, the acute sub-inflammatory or inflammatory stages.

"Under these circumstances other indications arise, which call forth the application of the whole medical mind. The *methodus antiphlogistica* is to be employed not only in a very mitigated manner, but it must be combined with, and often superseded by, antispasmodic, antinervous, diffusively stimulating, and tonic remedies. As, in the class of tonic medicines, cinchona holds a prominent station, I think it right to observe that this article is scarcely ever

useful, and is often injurious, in continued fever, during the existence of a hot skin, a quick pulse, and a loaded tongue; cases of gangrene excepted, where indeed the temperature is in general any thing but high, and where cinchona, aided by camphorated mixture, good wine, and a suitable position of the body, is an extremely valuable curative agent."

Dr. O'Reardon gives, a few minutes before the time that the paroxysm of ague is likely to occur, "a draught composed of three or four drachms of Ether Sulphuricus, from fifteen to twenty-five drops of tincture of opium, two ounces of water, and two or three drachms of simple syrup." The dose of ether here prescribed is unusually large, and we think would scarcely be borne by many patients. We have in many instances put off the fit of ague by a larger dose of opium, without the combination of ether. Dr. O'R. has known some intermittents recover well under very mild treatment, such as an emetic a short time before the rigor, and afterwards, during the intermissions, Infusio Anthemidis and Vin. Absynth. "On the other hand, I have seen not a few women fall victims to trivial and inert practice, and to the erroneous prejudices of a late celebrated Parisian physician against the employment of cinchona in ordinary intermittent cases. The result was that some agues, not originally dangerous, became more frequent and severe, caused considerable debility, and at length induced dropsy and diseased alterations of the spleen, liver, pancreas, and even kidneys, especially of the first-mentioned viscus."

Hydrophobia.—M. Husson lately showed, at the Academy of Medicine, a part of the tongue of a child, eleven years of age, who had been bitten on the cheek by a rabid dog. Nineteen days afterwards, she was attacked by hydrophobia, and death occurred two days after the invasion of the disease. Upon the mucous membrane of the portion of the tongue which was exhibited, there were about thirty pustules, very close together, of a flat shape, with a depression in the centre. They were thought to resemble the pustules of variola.—*Arch. Gen.* May 1829.

A Case of Perforation of the Stomach and Œsophagus, with brief Remarks.
By MARSHALL HALL, M.D. F.R.S.E. &c.

The little girl, whose case I am about to describe, had been subject, from a very early period after its birth, to attacks of bronchitis.

Early in April it became affected with pertussis. The symptoms of bronchial and pulmonary inflammation called for the abstraction of blood; and three, and then two, leeches were applied to the chest on two successive days, with other remedies usual in such cases. This was followed by exhaustion with reaction, the countenance varying, being sometimes pallid and cold, and sometimes flushed; and the pulse frequent and jerking. Soon after the second application of leeches, there were also frequent fits of convulsion, for which a cold lotion was applied to the head; and the warm bath was used frequently. The Hydrargyrum cum Creta was administered, with a mild nutritious diet. There was no sickness, no diarrhoea.

After a variable state of things, this little patient sank and expired, having lingered eight days.

Permission could not be obtained to inspect the body until the fifth day after death. The morbid appearances were then carefully noticed by Mr. R. WELBANK and myself.

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The general surface was extremely pallid, but there was little or no emaciation.

The bronchiæ were clogged with mucus, and the lowest lobe of each lung was hepatised.

On looking into the right cavity of the thorax, a small portion of venous blood was observed. The source of this was carefully traced. A small part of the pleura immediately adjacent and above this spot, extending upwards over the convex surface of the vertebræ, was found perfectly removed by erosion; the subjacent veins had been opened by the same process, and their blood had escaped; the nerves were left entire, as it were beautifully dissected. Proceeding with the examination, there was found, at a part which corresponded with these appearances, an opening that penetrated into the œsophagus; and through this opening a portion of the contents of the stomach flowed, on raising this organ. At the same moment the rest of the contents of the stomach escaped into the abdomen, through a large orifice at its most dependent part.

On further examination of the state of the œsophagus and stomach, the mucous membrane was found uniformly reduced to a gelatinous mass; the textures constituting the former were pierced by an irregular opening, of a size less than that of a pea; the peritoneum covering the latter was destroyed to a considerable extent. But there were no appearances of disease about the edges of either orifice.

The head was not examined. The other viscera presented no unnatural appearances.

The case thus briefly detailed leads to some remarks of great interest :

1. It cannot be doubted that in this case the perforations of the œsophagus and of the stomach resulted from the action of the gastric juices after death. This appears to be proved by the eroded state of the adjacent parts. This fact may, therefore, be regarded as established by the present and similar cases.

2. It is equally certain that there is one special disease or disorder of infants which leads to similar results, as stated in the interesting and valuable paper of Dr. JOHN GAIRDNER, in the Transactions of the Edinburgh Medico-Chirurgical Society, vol. i. p. 311.

3. It is a point of the utmost importance to state, in the account of post-mortem appearances, at what precise period after death the examination was made; and it might be useful sometimes to make the examination at two distinct periods, taking care not to disturb the parts at the first. It is quite plain that, had the parents of the little girl whose case has been given, earlier consented to an examination of it, some of the appearances which have been described would not have been observed.

4. It would be interesting to make a series of observations on rabbits and other animals, with a view of determining the circumstances which favor or oppose the erosion of the stomach by the gastric juice. The observations made by Dr. W. PHILIP, in the third edition of his singularly admirable work on the Vital Functions, pp. 131-2, appear to be too general on this point.

5. We might possibly employ the gastric juice in the minute dissection of the nerves, since this texture appears to resist the action of this agent, whilst that of the other parts is destroyed by it. The fact itself is mentioned by

M. CRUVEILHIER, in his *Medecine Pratique*, Cahier i. p. 145.—*Edinburgh Med. and Surg. Journal*.

PRACTICAL MEDICINE.

Combination of Lactuca Sylvestris and Digitalis in the Treatment of Hydrothorax.—We are indebted to Dr. TEGEL, of Aurich, for this mode of practice. M. BROSIUS has applied it in twelve “inveterate” cases of hydrothorax, and has much confidence in its efficacy. Although but two of these cases were radically cured, the symptoms of eight others were very materially relieved. In two patients only the remedy appeared to exert no beneficial influence; and in these instances the fact was corroborated, that, if the proposed remedy does not relieve during the first days of the disease, no advantage is to be expected from its continuance.

One of the complete cures surpassed every previous hope. The patient was a woman seventy-four years of age. She took four grains of the Extr. Lactuc. with one grain of the powder of Digitalis in a dose, every two hours. After the fourth dose the symptoms were much relieved; after the sixth, they had disappeared; and at the end of three days, during which time the patient had taken in all eighteen doses, a strong infusion of digitalis was prescribed. The cure was completed by light bitters.

In one case in which this combination only acted as a palliative, the patient was relieved in five attacks, in each of which the face, hands, and feet were oedematous. The sixth attack proved fatal.—*Journ. der Prak. Heilkunde*.

On the Employment of the Extract of Male Fernroot for the removal of Tænia.—Dr. J. J. EBERS has published eight cases in which the above medicine has been followed by complete success in the removal of tænia. The dose prescribed by the Doctor is from eighteen to twenty-four grains, administered at two doses, under the form of pills. He has repeated this two or three times occasionally, though in general one dose has been sufficient to cure the patient. He generally orders a purgative to be taken on the following day, which produces the evacuation of the worm, for the extract appears rather to have the property of killing the worm than expelling it.

Dr. Ebers draws the following conclusions from his experience:

1. The extract of male fernroot is one of the surest means that can be employed against the tapeworm.
2. It generally kills the worm speedily, and thus favors its expulsion from the body.
3. It acts as a specific.
4. It does not expel the tænia in a ball or mass, as other anthelmintics.
5. This medicine acts usually in a mild manner, and without producing any severe symptom: once only it produced some severe effects in a female who had not the tapeworm.
6. It also expels ascarides, but with this difference, that it does not kill them.—*Journ. de Chimie Med.*

Diagnosis of acute Idiopathic Inflammation of the Heart.—Dr. HEIM, of Berlin, has laid down the following symptoms as diagnostic of this formidable malady:

The disease begins with shivering and trembling of the whole body, and

intermittent chill, which latter, when present, may continue during twenty-four hours, but is followed by very little or no heat. There is no acute stitch felt, but pains in the heart precede the distinct attack for twenty-four hours. Sometimes the disease comes on suddenly. The patient has no cough: if in any instance cough occurs, it is entirely dry, neither mucus nor blood being expectorated. In the commencement the patient has the greatest anguish and the most agonizing pain, not in the chest generally, but immediately in the heart itself. The patient shrieks out, and is not quiet more than a second, repeating with great force the same word three or four times to express his most distressing sensations. He does not lie still an instant, but tosses himself about in bed like one half distracted, while his arms and head are in continued motion. The patient presses upon the region of the heart; and, if pressure be made by a by-stander, he impetuously demands that it shall be increased. The countenance is always extremely pale. The chest is elevated, and the head, which is in perpetual motion, is thrown more backwards. The face and hands are quite cold. Before each necessary bleeding, the pulse is throughout not to be felt. The patient feels every movement of the heart, and even complains of its painful throbbing; yet, when the physician applies his hand to the chest, he cannot discover the least irregularity. The stronger the pulsation of the heart is, the greater is the pain felt in the organ: it seems to the patient to strike upon a wounded spot. He is nauseated, but does not vomit; the greater his thirst is, so much the more does he refuse to drink, even when a glass of water is held to his mouth. He is very loquacious, even when otherwise naturally silent: we might also say physically, what the Scriptures assert morally, that "out of the fulness of the heart the mouth speaketh." Fainting and delirium are not uncommon.

A copious bleeding is followed by so great an alleviation of anguish and pain, which lasts for several hours, that the patient thinks himself quite cured. But the symptoms suddenly return again after the cessation. The anguish and pain is increased by warm applications to the chest, and the patient throws them off. If the treatment be neglected, or improper, the patient dies either in consequence of polypous formations on the internal or external surface of the heart, as well as on the internal surface of the pericardium, or with adhesions of the heart to this membrane, and effusions of pus or water into the cavity of the pericardium.

In the *Literarische Annalen der Gesammten Heilkunde*, Dr. A. H. KRAUSE, of Berlin, also relates a case of acute idiopathic inflammation of the heart. In the case witnessed by Dr. K. the above symptoms were well marked. Free bleeding, digitalis, and other obvious and appropriate treatment, restored the patient to health in less than a fortnight.

Observations on Spasm or Cramp of the Stomach; with Cases and Dissections.
By JOHN MACFARLANE, M.D.

Spasm of the stomach, although often sudden in its attack, urgent in its symptoms, and alarming in its appearance, has been either altogether overlooked by the majority of authors, or noticed only in the most cursory manner, as an occasional attendant on dyspepsia. It is, however, an important, frequently occurring, dangerous, and sometimes fatal, variety of stomachic disease. Its symptoms are in general well-marked and diagnostic. The treatment requires to be prompt, powerful, and peculiar; and although

in several cases it may be connected with a previously existing derangement in the functions of the affected organ, yet in others, and these by no means rare, it originates suddenly from distant irritation, or without any previous morbid indication.

When spasm affects the stomach, there is the most acute pain, with a feeling of rigid contraction, violent twisting or tearing in the epigastrium, soon followed by painful and interrupted breathing, difficult articulation, pallid countenance; small, hurried, and contracted pulse; and occasionally with coldness of the extremities, and rigid contraction of the recti abdominis and gastrocnemii muscles.

In severe forms of the disease, the patient usually complains of a sensation of rigid contraction, or drawing together, in the epigastric region, occasioned by the inordinate contraction of the muscular coat of the stomach, and occasionally producing a hard circumscribed tumor, perceptible to touch. When, however, the abdominal muscles participate in the spasm, the tension and inequality of surface produced by the morbid contraction of the recti abdominis effectually prevent the discovery of this tumor. The diaphragm, it is presumed, very soon sympathises with this state of the stomach, and becomes also spasmodically affected, as the short, interrupted, and highly distressed respiration, and the difficult articulation, evidently show. Indeed, every person who has seen a violent attack of this complaint must have observed the change in the respiration which takes place at the height of the paroxysm; the difficulty, and often the impossibility, of performing inspiration and expectoration in an unobstructed manner, and the half-suppressed cries or moans which the patient utters, apparently occasioned by the rigidly contracted diaphragm, remaining as an almost immoveable partition between the thorax and abdomen. If the hand is applied either to the thorax or epigastrium, we can seldom discover the alternate elevations and depressions of these parts indicative of a natural state of breathing.

With respect to the causes of the disease, the author has seen several instances where it was produced by great mental anxiety. In some cases, where a strong disgust or antipathy exists to certain dietetic articles, any attempt to eat them, or even simply naming them to the patient, has been followed by severe spasmodic affections of the stomach. But the cases are, however, far more numerous in which the disease is produced, not through the influence of the imagination, but from the introduction into the stomach of some substance, which, from peculiar idiosyncrasy, acts on this organ as a morbid irritant. In addition to these exciting causes may be ranked sudden exposure to cold, drinking cold liquids while the body is heated, coldness of the lower extremities, intemperance, &c.

"Females are more subject to this disease than males, in the proportion of two and a half to one. Accordingly, of thirty-six cases which I have seen, twenty-six occurred in females, and ten in males; and, in twelve of these, no affection of the stomach, or other predisposing cause, could be discovered. Irritation in the uterus is also said to be a frequent cause of spasm of the stomach. CULLEN says, that 'the ordinary flow of the menstrual discharge retarded, or totally suppressed, affects the stomach, and disposes it to be affected more readily with spasm.'"

When long continued, spasm of the stomach is apt to induce inflammation of this organ. The occurrence of violent hæmatemesis during a paroxysm of spasm of the stomach, probably occasioned by a partial laceration of the

internal coat of that viscus, is illustrated by a case, in which the patient recovered.

An interesting case is related where death took place in little more than an hour from the commencement of the spasm, and where, although the body was not allowed to be examined, the author thinks the fatal event was produced by laceration of the stomach from the violence of the spasms.

In another instance, where the symptoms were well marked, and the history of which is given, a lacerated opening was found in the stomach on dissection, without the slightest vestige of organic disease, of gangrene, erosion, or ulceration.

The disease may prove fatal without inducing any lesion of the stomach, and an instance of this kind is detailed where, on dissection, the only morbid appearance that could be discovered by the most accurate investigation was general softening of the cerebellum, with vascular turgescence in the base of the brain.

In the treatment of spasm of the stomach, where we find it occurring in individuals whose general health has been impaired by confinement or sedentary employments, or who have suffered from anxiety, fatigue, or exhaustion, and who are free from stomachic ailments, the author has found the paroxysms frequently subdued by a drachm of sulphuric æther with fifty drops of *lanthanum*, its good effects being sometimes instantaneous; while in other cases the dose required to be repeated two, three, or even four times, before relaxation of the spasm was effected. In a few other cases the same decisive results were obtained, although the medicine was speedily rejected by vomiting. "On one occasion, (says the author,) when I was about to operate on a woman for strangulated hernia, the husband, a stout robust man, on account of anxiety for his wife, was suddenly seized with nausea and slight vomiting, followed by excruciating pain in the region of the stomach, and the other symptoms of violent spasm. A bladder containing pounded ice, which had been applied to the hernia, was laid over the epigastrium, and with the happiest effects; for in less than five minutes the pain was removed. This application is much recommended by M. BARRAS in neuralgia of the stomach; but I have had no other opportunity of trying its efficacy." When the attack is produced by the introduction into the stomach of some morbid irritant, the speediest relief will be obtained by the exhibition of an emetic.

"I have in two cases seen the most marked advantage from venesection; and that when, from the aspect of the patients, the cold clammy state of the skin, and the feebleness of the pulse, the reverse of this treatment seemed to be indicated."

When the recurrence of this disease is connected with functional derangement of the stomach, much benefit is found from small doses of quina, but especially from the use of the subnitrate of bismuth. When the attack is excited by depraved intestinal secretions, or by constipation, which frequently happens, more benefit is to be derived from mild laxatives and alteratives, than from strong or drastic purges. The diet should, of course, be strictly attended to, and such articles selected as are light and of easy digestion; for, when the stomach is much stimulated, either by the quantity or quality of the food, spasmodic excitement, more or less powerful, is not unfrequently produced.—*Glasgow Med. Journal.*

New Mode of administering Quinquina.—Dr. P. RICHET, of Metz, relates, in his Thesis presented to the Faculty of Medicine of Strasbourg, four cases of facial neuralgia, which, after resisting the ordinary treatment, yielded to the administration of powdered quinquina one grain, and snuff two grains, mixed, and used as snuff. The above dose was always sufficient, and in from two to three days the patients were cured as if by enchantment.

Treatment of Nymphomania.—Dr. OZANAM, of Lyons, communicated to the Royal Academy of Medicine the cure of a case of nymphomania, by touching the swollen genital parts with a solution of four grains of nitrate of silver in an ounce of water. A slight eschar resulted from this application, and the sensibility of the parts were decreased; and in four days, by the application of this mild caustic, repeated twice a day, the patient was cured.—*Journal Général de Médecine.*

On the Vinous Tincture of the Seeds of Colchicum Autumnale.—Professor CHELIUS has ascertained that, during the use of the above medicine, the proportion of uric acid in the urine is very much augmented, and he attributes to this fact the benefits which it produces in rheumatism and arthritis. Dr. C. has employed the vinous tincture with success, both in acute and chronic arthritis; and with advantage also in sciatica, rheumatic ophthalmia, articular dropsies, and some cases of paralysis of the inferior extremities, not produced by an arthritic cause. Dr. C. commences with a dose of from twenty to thirty drops, and gradually and cautiously increases it, till signs of gastric irritation manifest themselves. He has never seen it produce ill effects, but it must be given with caution; he thinks the dose given by the English practitioners too large.—*Heidelberg Klinische Annalen*, tome iii.

SURGERY.

Pannus successfully excised. By Professor GRAEFE.—A man, aged forty-five years, blind of both eyes, in consequence of the whole of the conjunctiva of the cornea and sclerotica of both eyes being changed into a vascular thick membrane, having been treated, without benefit, by partial excisions and topical applications, Professor Graëfe resolved to excise it. Accordingly, having raised this membrane, near the cornea, with forceps, it was dissected with scissors from half the cornea of each eye. As soon as the inflammation produced by this operation had disappeared, the membrane was excised from the other half of the cornea. Some days after, the rest of the membrane was removed in the same way. Vision was restored, and the patient was entirely cured by solution of opium, applied to the eye with a brush.

M. Graefe cites this case to show, that the excision of this description of pannus is not effectual, unless performed part at a time, and at periods sufficiently near, to prevent the membrane being reproduced, and with the precaution of not excising too much at a time, lest dangerous irritation should be produced.—*Institut de Clin. Chirurg. et Oph. de l'Univ. de Berlin.*

On Ligatures of Ruptured Arteries complicated with Fractures or Gun-shot Wounds.—The rupture of a principal artery of a limb, in fractures and gun-

shot wounds, has been supposed to require the amputation of the limb. M. DUPUYTREN has tried, in two cases, the tying the artery, some distance from the injury, as in the operation for aneurism, and with the happiest success. Professor DELPECH, of Montpellier, has also performed it with advantage in one case. M. Dupuytren has published an interesting memoir on the subject in the fifth volume of the *Repertoire d'Anatomie*: he thinks that many limbs may be saved by this operation.

MIDWIFERY.

On the dangerous Effects of Secale Cornutum. By R. M. HUSTON, M.D. (*North American Med. and Surg. Journal*, January 1829.)

Our own experience in the use of this now very general remedy, is much too limited to justify us in drawing any positive conclusions as to its merit. The opinion we have formed from its employment in a few cases is, that its power of increasing uterine action is very uncertain; but we have had no reason to suspect that it has produced any ill effects either upon the mother or the infant. As we have made frequent extracts from the American Journals in praise of the ergot, we deem it incumbent upon us to take from the same source some remarks in proof of its dangerous effects, which are deserving the deliberate attention of practitioners of midwifery. The paper from which we select the following observations was read before the College of Physicians, by Dr. HUSTON.

As far back as the fifteenth century, the ergot, or spurred rye, was known to exert a very powerful influence upon the human system, as well as upon that of brutes; for we find the production of epidemics, mortification of the limbs, convulsions, &c. was at that time, and subsequently, unhesitatingly ascribed to it. It does not appear, however, to have been used in regular practice until its recent introduction by Dr. STEARNS, of New York. Dr. H. remarks that, in Philadelphia, a very large proportion of the tedious, difficult, and unfortunate cases in midwifery occur among those women who are remarkable for their great muscular strength, and who possess a tone and rigidity of every part that nearly bids defiance to all the means we can employ to overcome it; and yet such women have weak, trifling, and inefficient labour pains; nor do they alter until, by active depletory means, or until they are worn out by days and nights of restlessness, anxiety, and fatigue, the system loses great part of its tone. On the contrary, the emaciated, consumptive, or the spare and delicate city lady, has often the most rapid and efficient labour. Nor is the speedy termination of such cases solely from the want of resistance. The uterine contractions are really powerful.

From these facts we learn the necessity there is for the temporary suspension, to a considerable extent, of the tonicity of the parts concerned in parturition, in order to ensure a prompt delivery. Not only that we may avoid delay from the resistance which would otherwise be afforded by that state of the parts, but also the constant and long-continued pressure which would thereby be exerted upon the fœtus, cord, and placenta; and that the whole nervous or motive energy of the parts may be concentrated in the parturient paroxysms, without any drawback from the co-existence of a different and antagonizing action. A moment's reflection upon the known effects of ergot will enable us to judge how far it is calculated to answer these indications.

The property for which it is most remarkable is, that of increasing the tonic action of the uterus. After its exhibition, if the hand be placed over the uterus, it will be found to be constantly hard, owing to a *tetanic* or permanent contraction of its fibres; whereas, in natural cases, the uterus hardens under the hand during a pain, and relaxes again as soon as it goes off. The mode in which the ergot acts is also shown by the scanty discharge of blood which takes place at the time of parturition, even in cases where there is great constitutional predisposition to hemorrhage. If, then, it be true that the tonic contraction of the soft parts concerned in parturition, more especially the uterus, is neither a natural nor, under ordinary circumstances, a desirable condition until after the delivery of the child; and if it be the principal tendency of ergot to excite or produce this state of the parts, the danger of administering it, even under the circumstances usually indicated by authors, must be sufficiently apparent.

From his own experience, Dr. H. is convinced that the ergot is a most dangerous and destructive drug. He makes this declaration under the fullest sense of the great responsibility which every man ought to feel when giving testimony upon a subject of such importance, and from a conviction that the medicine is now doing incalculable mischief.

It is stated in a note, that in no other place in the United States, nor perhaps in the world, is ergot so much praised, and by such distinguished men, as in Philadelphia; and in no other of the principal towns in the United States, judging from their bills of mortality, is the number of stillborn children in so large a proportion to the whole number of deaths. This item in the bills of mortality has become so glaring as to attract the notice of the newspapers.

In the course of the last thirteen years, Dr. H. has used the ergot in a large number of cases. He has never given it to a woman in labour, excepting when the pains were trifling and ineffectual; nor then, until he had satisfactorily ascertained that the head was well situated, the pelvis of good dimensions, the os uteri thoroughly dilated, and the external parts in a soft and yielding condition. In several instances he was compelled to use the forceps after the complete failure of the medicine; and, when it succeeded, the children were stillborn in a proportion which shocked his feelings. As a proof that the same results have happened to others, the following evidence is adduced.

Of seven cases reported by Dr. CHURCH, in his *Essay on Ergot*, there were but two liveborn children. It is true he does not attribute the deaths to the medicine, but the fact is striking.

Dr. HALCOMBE, in a letter to Dr. DEWEES, says, "For some time I used the scruple doses, or corresponding doses of the decoction, which I am afraid are every where yet too common; but soon abandoned this practice, in consequence of several fatal demonstrations of its impropriety." The dose, of which the ill effects are here so ambiguously spoken of, is that which is recommended by nearly every writer on the subject. Indeed, so decidedly pernicious has it been in the hands of some, that, unable to account for it in any other way, they have supposed it actually to have poisoned the child in utero; and Dr. Halcombe expresses his firm belief, in the letter already referred to, from what he has seen and heard, that more children have already perished by the injudicious use of ergot, during the few years which have followed its

introduction into the practice of this country, than have been sacrificed by the unwarrantable use of the crotchet for a century past! It is no set-off to say that Dr. H. speaks only of its *injudicious* use; for that which he mainly combats as injudicious is scruple doses, the very thing which our most judicious writers recommend.

A reference to the paper of Dr. WARD, of New Jersey, will show that the practice has been but little, if at all, more successful in his hands.

In a paper by Dr. CHARLES HALL, of St. Alban's, Vermont, published in the American Medical Review, and republished in France, we have the following observations: "Although, in most cases of real labour, the child is forcibly propelled into the world by the aid of this article, there are, nevertheless, instances in which its power is not exerted to this end. Instead of that powerful unceasing increase in the pains of labour, which so astonishingly expedites the expulsion of the fœtus, it sometimes excites constant distress of a general nature, without any apparent influence on the efforts of labour. In cases where it does not favor immediate expulsion, it seems to have a fatal tendency on the child; for in such cases the child is generally stillborn." He adds, "I have frequently had recourse to it; and have learned, not only from my own experience but from that of others, that it does not always increase the pains of travail; that it is hazardous under any circumstances, and occasionally produces fatal effects."

Dr. WM. MOORE, of New York, whom Dr. Hosack speaks of as an eminent and judicious practitioner, says, "IT APPEARS TO BE INJURIOUS TO THE CHILD AT ALL TIMES; for, in every case in which I have seen it exhibited, the child has been stillborn; and, in the greater part of them, it was not possible to restore it to life."

Dr. HOSACK, in his letter to Dr. HAMILTON, of Edinburgh, on this subject, remarks that, in three cases in which he gave it, "although no evidence existed, previous to the use of the medicine, that the fœtus was not living, in every case in which it was administered the child was stillborn." In fact, so convinced is Dr. Hosack of this general consequence from the use of this article, that in the same letter he uses this emphatic language: "The ergot has been called in some of the books, from its effects in hastening labour, the *pulsis ad partum*: as it regards the child, it may, with almost equal truth, be called the *pulsis ad mortem*; for I believe its operation, when sufficient to expel the child, in cases where nature is, alone, unequal to the task, is to produce so violent a contraction of the womb, and consequent convulsion and compression of the uterine vessels, as very much to impede, if not totally to interrupt, the circulation between the mother and the child.

Dr. Huston suggests, also, that some mischief may be caused by compression of the child's brain for a longer than ordinary period, from the premature contraction of the uterus not suffering the head to recede at regular and ordinary intervals, so as to relieve this condition by the natural elasticity of the parts.

Dr. Huston is aware that the position assumed of the fatal effects of ergot, is in opposition to the opinions and experience of some of the most eminent of the profession. This discrepancy may, he says, perhaps, be in part accounted for from their patients being in that rank of life where every comfort can be procured, and where accidents, privations, excessive fatigue, and the many untoward circumstances which give rise to bad cases in the inferior ranks of life, are seldom felt. Among that class of patients, from their

general habits of ease and indulgence, there is necessarily a softness and flaccidity of the muscular system, which may admit, or even demand, the use of an article which so powerfully excites the tonic action of the uterus, and which, from that very property, would be inapplicable to general practice.

Dr. H. is aware that it is admitted by the admirers of ergot that its improper use is doing incalculable mischief: this being conceded on all hands, and being reprobated by all, constitutes no part of the object of his paper, which is meant to warn the profession of the danger there is in using the article under *all* the restrictions usually imposed. He does not assert it will always prove fatal, as apprehended by Dr. Moore. He knows to the contrary: but that it will very often, with all the prudence and circumspection that can be used. We presume these remarks are meant to refer to the infant, and not to the mother.

Of ergot as an emmenagogue Dr. H. has no experience, but its utility in menorrhagia he has experienced; and this fact seems, he thinks, to contraindicate it in the former capacity.

The opinions of Dr. H., and the other practitioners whose evidence he brings forward to prove the dangerous effects of the ergot, are decidedly in opposition to the sentiments of the various members of the profession who have given the remedy extensive trials in this country. We have heard of a few cases in which it was doubtful whether the child had not suffered from its employment; and in one case, where it was given, we believe, to arrest hemorrhage after abortion, the woman suffered severely from constitutional disturbance, which could not, however, with any certainty, be attributed to the ergot. If every accoucheur who employs this remedy will *candidly* and *impartially* state the effects that it produces both upon the mother and child, and at the same time *distinctly* describe the *particular circumstances of each case* in which he has exhibited it, we shall no longer have to lament so distressing a difference of opinion upon a subject of such immense importance; for a body of evidence would thus be procured from which correct inferences may assuredly be derived.

INTELLIGENCE.

MONTHLY REPORT OF DISEASES.

We have not observed any circumstances, in the general course of the diseases which have fallen under our notice since our last report, that merit particular detail. Upon the whole, the number of complaints has much diminished within the last three weeks, and those which have been most frequent have been slight, and easily controlled by ordinary treatment.

We have heard of a very severe and fatal fever at St. Alban's, that has prevailed there during the last month.

Examination for Prizes and Honours at the University of London.

We have only had an opportunity of looking over the answers given by one of the successful candidates, Mr. R. GARDNER, to the questions on *Materia*

Medica. They are many of them so excellent, so concise, yet so comprehensive, that we are induced to give them publicity.

The number of questions proposed by Professor THOMPSON was forty-five, all of which were answered by Mr. Gardner. We select the following, as being especially creditable both to the teacher and the taught. We were particularly struck with the neat and satisfactory answer given to the 21st question.

Question 3. What is white arsenic; by what chemical properties is it distinguished; and what are its effects on the system when it is taken into the stomach in an overdose?

Answer. White arsenic is an oxide possessing the properties of an acid, composed of one equivalent of metal and two equivalent of oxygen. It is distinguished by forming Scheele's green with the ammoniaco-sulphate of copper, a yellow precipitate with the ammoniaco-nitrate of silver, a white precipitate with lime water, a yellow precipitate with sulphuretted hydrogen. Its effects as a poison are constriction in the throat, vomiting, purging, pain in the stomach and gripings, bloody stools, delirium, insensibility, with syncope and death. The body is said to run into very rapid putrefaction.

Q. 4. How is its presence in the stomach detected when it has been taken as a poison, and has proved fatal?

A. In the last answer the tests for white arsenic are enumerated: to satisfy a jury, I should boil the contents or substance of the stomach, filter the solution, pass sulphuretted hydrogen through it, collect the precipitate, dry it, and reduce to the metallic state by black flux.

Q. 9. What is the cause of the increased activity of gum-resins, possessing purgative properties, when they are combined with camphor?

A. Perhaps from camphor increasing the solubility of the gum-resin in the stomach. It may, however, be analogous to the increased power of purgatives when combined with tonics.

Q. 13. How, and from what part of the poppy is opium procured; what is its active principle; and what is the nature of its action on the animal economy?

A. Opium is obtained by wounding the unripe capsules in the evening, care being taken not to penetrate the seed-cells. In the morning the juice is scraped off, and inspissated by the heat of the sun. Its sedative principle is morphia, combined with meconic acid; its stimulating property is said to reside in narcotine. It acts directly on the nervous system, producing first stimulating effects, soon followed by collapse and sleep.

Q. 14. In what respect do the sedative effects of opium differ from those that follow the excitement of other stimulants on the animal system?

A. The sedative effects of opium are greater, in proportion to its stimulating effect, than the secondary effect of other stimulants. Its primary effect is very transient; when it produces its sedative effect, the mind is very tranquil. The secretion from the skin much augmented; the other secretions diminished.

Q. 17. Both astringents and stimulants influence the living system through the medium of the nerves. What is the most probable theory explanatory of their difference of effect on the system?

A. The effect of astringents is partly chemical, as is evident from their action on dead animal matter, and upon the mucous membrane of the mouth.

This, however, is probably combined with an action on the vital and nervous functions. But the last effect is more of a tonic nature, and not in so great a degree as the effect of stimulants. Stimulants produce their effects, when they stop hemorrhage, by stimulating the extreme vessels to contract.

Q. 21. What is the cause of the leaden hue which the internal administration of nitrate of silver sometimes communicates to the skin? Describe the manner in which it is effected, the changes that take place in the chemical composition of the nitrate, and in what part of the system these changes happen.

A. While the nitrate is in the circulation, it is under the control of the vital influence, but, when it gets to the skin, is subject to chemical affinities. The skin exhales muriate of soda and sulphuretted hydrogen. The effect of light is to blacken muriate of silver.

Q. 24. How does iodine affect the system? Is there any proof that it is conveyed into the blood?

A. Iodine acts particularly upon the glands. It passes into the blood, and may be detected by fœcula in the urine of those who have taken it.

Q. 32. Why is the subacetate of lead more likely to produce colica pictorum than the acetate? And, in the event of its proving a poison, what antidote would you employ, and what principle would guide your selection of an antidote?

A. The subacetate is more likely to be precipitated as an oxide from its combination with a small quantity of acid; and we find that the carbonate and oxide are what generally produce the poisonous effects. I should give sulphates from sulphuric acid, forming an insoluble and inert compound with lead. Alum has been much recommended in colica pictorum. When lead acts as a poison, opium, castor oil, &c. may also be given.

Q. 35. In what manner does the tartrate of antimony and potassa produce its emetic effect?

A. I should suppose the emetic tartar acts by being taken into the circulation, and acting upon the nervous system through its medium. It produces much nausea. It acts as an emetic when injected into the blood, and when applied to a wound.

Q. 43. In a chemical point of view, in what does guaiacum differ from a gum-resin?

A. Resin is changed by concentrated acid to artificial tannin. Nitric acid changes guaiacum to oxalic acid. The sulphuric acid blackens it.

BOTANY.

Apothecaries' Hall; 26th June, 1829.

SIR: I am directed by the Master and Wardens to transmit to you the following extract from the Minutes of a Court of Assistants of the Society of Apothecaries, held on Tuesday, the 23d instant.

I am, sir, your very humble servant,

JOHN SAYER, Beadle.

“The Society of Apothecaries, anxious to promote the science of botany, and more particularly that branch of it which is immediately connected with the study and practice of medicine, have ordered that their Botanic Garden

at Chelsea shall be opened on Friday, the 3d day of July, 1829, between the hours of nine and eleven; and on every succeeding Friday, at the same time, until further notice.

"It is intended that admission shall be given to all such medical students as are pupils to the established professors and tutors in the metropolis, whether in medicine, chemistry, materia medica, or botany. Such students to apply, at least three days prior, at the beadle's office in Apothecaries' Hall, for tickets of admission for that purpose; which the master and wardens will grant to such persons as they may think proper.

"In order that the master and wardens may be enabled to exercise suitable discretion in granting such tickets, each student must leave with the beadle a letter of recommendation from his tutor, stating that such student has been attentive to his studies, and is, in his opinion, desirous of improving himself in the science of medical botany.

"It is ordered that copies of these resolutions be forthwith sent to the respective professors and tutors in the branches of medical science above mentioned, containing a request that they will make the requisite communication to their pupils."

Dr. PROUT.—This gentleman has been recently elected a Fellow of the College of Physicians, in conformity with what has lately become the custom of admitting a Licentiate annually to that honour.

Ladies' Lying-in Institution.—In a prospectus of this new speculation, the name of Mr. HOULTON has been published as consulting surgeon. Mr. H. has addressed a letter to the Editor of the Medical Gazette, informing his medical friends that his name has been introduced through a *mistake*, and that he knew nothing of the *document* until he saw it, in an accidental manner, in print. If the directors of this extraordinary institution fall into many more such *mistakes*, the nature and policy of the society will be more accurately expressed by omitting the "in" in its denomination.

Bloomsbury Dispensary.—Mr. S. COOPER, author of the "Surgical Dictionary," &c. has been elected Surgeon to this institution by a very large majority of votes.

MONTHLY LIST OF MEDICAL BOOKS.

[*Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.*]

An Experimental Inquiry into the Laws which regulate the Phenomena of Organic and Animal Life. By GEORGE CALVERT HOLLAND, M.D. &c. &c. —8vo. pp. 462. Edinburgh and London, 1829.

An Essay on the Connexion between the Action of the Heart and Arteries and the Functions of the Nervous System, and particularly its influence in exciting the involuntary Act of Respiration. By JOSEPH SWAN.—8vo. pp. 162. Longman, 1829.

An Essay upon the Treatment of the Deep and Excavated Ulcer: with Cases. By RICHARD ANTHONY STAFFORD, M.R.C.S. and lately House-Surgeon to St. Bartholomew's Hospital.—8vo. pp. 72. 1829.

Medical Botany, Nos. XXX. and XXXI. By JOHN STEPHENSON, M.D. F.L.S. and JAMES MORRIS CHURCHILL, F.L.S. Lecturer on Midwifery, &c. —Published by TILT, 86, Fleet street.

The graphical embellishments of these Numbers are quite equal to the preceding, and the descriptive text as practically instructive.

Essay on a Morbid Affection of Infancy, arising from circumstances of Exhaustion, but resembling Hydrancephalus. By MARSHALL HALL, M.D. F.R.S.E.—Pp. 40. 1829.

Address of Earl STANHOPE, President of the Medico-Botanical Society, at the Anniversary Meeting, January 1829.

An Oration delivered before the Medico-Botanical Society of London, at the commencement of its ninth Session. By JOHN FROST, F.R.S. Edin. F.L.S. Director of the Medico-Botanical Society of London. Dedicated, by permission, to the King.—Trenttel and Würtz, 1828.

A Practical Synopsis of Cutaneous Diseases, according to the arrangement of Dr. WILLAN: exhibiting a concise View of the Diagnostic Symptoms and the Method of Treatment. By THOMAS BATEMAN, M.D. F.L.S. &c. The Seventh Edition. Edited by A. T. THOMSON, M.D. F.L.S. Member of the Royal College of Physicians, and Professor of Materia Medica and Pharmacy in the University of London, &c.—8vo. pp. 460. Longman, 1829.

METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

June	Rain gauge.	Moon.	Thermom.			Barometer.		De Lue's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	3 P.M.	9 M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 a.m.	2 p.m.	10 p.m.
			9 A.M.	3 P.M.	9 M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 a.m.	2 p.m.	10 p.m.
20			70	72	54	29.77	29.69	40	40	SSE	SE	Fine	Fine	Fine
21			65	76	57	.73	.70	44	44	ESE	SSE	Cloudy	Cloudy	Cloudy
22			63	75	57	.68	.70	48	50	SE	S	Rain	Show'ry	Fine
23			68	77	59	.80	.85	50	49	SSW	SSW	Fine	Show'ry	Cloudy
24			70	74	59	.92	.96	47	45	SSW	SW	Cloudy	Fine	Fine
25			65	72	61	.96	.84	44	48	S	ESE	Fine	—	—
26	.57		68	73	58	.84	.73	48	50	SSW	SW	Cloudy	Cloudy	Cloudy
27			64	68	59	.57	.36	50	52	SW	ENE	Cloudy	Rain	Cloudy
28	.23		65	70	55	.43	.49	53	55	ENE	NE	Fine	Cloudy	Rain
29			57	72	57	.56	.63	57	55	N	NNW	Rain	Rain	Cloudy
30	.42		67	67	56	.63	.62	55	56	NW	WSW	Cloudy	Show'ry	Cloudy
July 1		●	57	68	54	.52	.35	57	56	SSW	S	Rain	Rain	Rain
2	.60		59	71	54	.42	.56	54	53	SW	SWb.S	Fine	Fine	Fine
3			62	69	52	.48	.26	52	51	SWb.S	SWb.S	Cloudy	Fine	Cloudy
4	.14		65	66	53	.47	.48	51	51	WSW	WSW	Cloudy	Rain	Fine
5			61	67	52	.54	.65	52	52	SSW	WSW	Rain	Cloudy	Cloudy
6			64	70	56	.72	.80	53	53	W	W	Cloudy	Fine	Cloudy
7			59	68	56	.70	.60	53	50	WSW	SW	Rain	Rain	Cloudy
8			63	71	57	.69	.63	50	50	W	WSW	Fine	Fine	Fine
9			61	67	50	.67	.74	45	46	W	WSW	Fine	Show'ry	Fine
10	.60	☾	67	68	57	.70	.59	47	52	W	SW	Fine	Show'ry	Show'ry
11			60	64	56	.47	.32	54	54	SW	SSW	Cloudy	Show'ry	Cloudy
12			61	69	59	.41	.49	56	56	SSW	SW	Show'ry	Show'ry	Rain
13			64	70	62	.56	.67	57	57	SW	SW	Cloudy	Fine	Fine
14			68	74	59	.75	.72	57	54	SW	WSW	Fine	Show'ry	Fine
15	.95		68	74	59	.85	.82	54	50	WSW	SW	Fine	Fine	Fine
16		○	67	69	57	.82	.75	47	50	SW	WSW	Fine	—	Cloudy
17			64	65	53	.72	.47	50	55	SW	SSW	Show'ry	Rain	Cloudy
18			62	70	58	.43	.53	57	54	SW	W	Rain	Rain	Rain
19	.61		62	73	52	.72	.80	51	50	W	W	Fine	Cloudy	Cloudy

The quantity of Rain fallen in the month of June, was one inch and 41-100ths.

NOTICES.

Communications have been received from Mr. CHENEVIX, Mr. PAXTON, Mr. HODSON, &c.

MEDICUS* attaches too much importance to the scribbler he mentions.

Godliam Lib

THE LONDON
Medical and Physical Journal.

NO. 367, VOL. LXII.] SEPTEMBER, 1829. [NO. 39, *New Series*.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long, but an invaluable series.—KUSH.

ORIGINAL PAPERS, AND CASES,
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER
AUTHENTIC SOURCES.

VARIOLA.

On the precise Seat of the Variolous Pustule. By Mr. GEORGE OAKLEY HEMING, Surgeon; Member of the Royal College of Surgeons.

It has appeared to me that a distinction may be made between the pustule of variola and the vesicle of varicella, by observing the distinct seat of these affections. From an investigation pursued with considerable care, I think I have ascertained that the former has its seat in the sebaceous glands and mucous follicles, whilst the latter seems to be merely subcuticular in general.

The exact seat of the variolous pustule seems to be determined by observing the textures most apt to be affected by it, and the textures excluded from it; the form of the pustule itself, its difference from that of the vesicle of varicella, and its similarity to that of some other affections of the sebaceous glands.

A still more direct proof of this point flows from minutely observing the anatomy of the sebaceous glands and mucous follicles, and tracing that of the variolous pustule.

The practical advantages of the inquiry consist in its affording a source of diagnosis, and in its tendency, in this manner, to settle some disputes which still divide the medical profession, and to enable us better to decide upon the real value of vaccination.

It may be observed that the variolous pustule is confined to the skin and mucous membranes. After much diligent

search, I have never been able to detect any thing at all resembling it in the serous membranes. I do not mean to say that there is, in no case of variola, inflammation of a serous membrane, but that I have not been able to detect any appearance of variolous pustule, or difference from that of common inflammation. Then the circular, flat, and indented form of the variolous pustule differs widely from the hemispherical form of the vesicle of varicella: it is obvious, too, from the hardness felt on an early examination, that deeper seated parts are affected in the former than in the latter disease.

Before I proceed, I would observe that, although I have spoken of the variolous pustule as affecting the follicles of the mucous membrane, such pustules are never perfect; the presence of a cuticle being required to form the perfect pustule. The variolous affection of the mucous membrane assumes, first, the form of an inflamed point, then becomes an ulcer, and then passes into a state resembling that in aphthæ. Wrisberg, Contumnius, and others, may therefore well have disputed whether the perfect pustule of variola existed internally.

It is well known that the variolous pustule occurs in every part of the surface of the body. Haller considered that the sebaceous glands had not been demonstrated in every part. Morgagni had seen them in the back, neck, and other parts. Bichat goes so far as to doubt the existence of the sebaceous glands; but his follower in this inquiry, Beclard, distinctly affirms their existence. Lastly, Chevalier says that they exist in every part of the cutaneous texture. The last-named author has deposited preparations in the museum of the College of Surgeons, showing the sebaceous glands in the nose and chin of the infant. He contends, in his Lectures delivered before the College, which have been since published, that there are two sets of these glands, one more superficial than the other.

The variolous affection is to be seen in some part of the track of the mucous membrane, in almost every case of the disease; but in no single case in great number. It is equally true that the mucous follicles pervade the whole of these membranes. There are some parts of the mucous membranes, as on the tongue, the palate, and the mouth generally, covered by a cuticle of sufficient thickness occasionally to allow of being distended by fluid effused underneath, and, consequently, of the formation of a pustule. But, in most parts of the mucous membranes, there is either no cuticle, or it is so thin as not to allow of distention by the

subjacent effusion of fluid: in these, of course, no pustule can be formed; but we observe the mucous follicle enlarged by inflammation, covered by a layer of whitish matter, very much resembling that in aphthæ, and sometimes ulcerated. Whether one or other of these appearances be found, will depend upon the different periods of the disease at which the examination of the mucous membranes takes place. It is a curious fact that, throughout the mucous lining of the bowels, extending from the stomach to the rectum, there is no portion of it where the mucous follicles are so frequently affected by smallpox as in that of the appendix vermiformis.

In regard to any affection of a serous membrane, I must repeat that I have never observed any thing either pustular or of the character of the affection of the follicles of the mucous membrane, which I have just described.

The sebaceous glands, as is well known, are small bodies whose office is to secrete a greasy matter, which is poured forth by their excretory ducts, and distributed over the skin; and into each of these ducts the cuticle dips. This organization cannot be discerned in the healthy state of the sebaceous glands; but, when they are diseased, it may sometimes be seen even without a lens. They are very prone to diseases, of which one form is called *acne*. It was the resemblance that this diseased state of the sebaceous glands bears to the little tumors found in the early stage of smallpox, and the striking similitude to a smallpox pustule at a more advanced period, when an herpetic eruption about the chin extends over an enlarged sebaceous gland, conjoined to other circumstances, which first led me to suppose that the sebaceous glands and mucous follicles were the parts affected by variola.

Sir A. Cooper remarks, that some tumors arise from an enlargement of the sebaceous cysts, in consequence of their orifices being obstructed; and he observes, that "within the cyst there is a lining of cuticle, which adheres to its interior, and several desquamations of the same substance are found within the first lining." I am now attending a young woman who has a disease of these glands, and the orifices are so much enlarged that I can pass into them a bristle. I applied a blister, and, by this means removing the cuticle, had a drawing taken of the part, in which this fact is illustrated. The sebaceous glands and mucous follicles bear the strictest analogy to each other, both in their structure and functions, and consequently are apt to be affected by the same diseases.

I now proceed to give an account of the appearances of

the perfect variolous pustule: I would first observe, most particularly, that, although the indentation of the pustule of smallpox has generally been considered by medical writers as one among many other circumstances by which we may be enabled to distinguish it from chickenpox, it appears to me that, not being acquainted with the cause of this very curious circumstance, they have not attached to it the importance which it seems to demand. This indentation in the pustule can only depend upon the structure of the part affected; it is the natural formation of the cuticle at that part which produces the depression in its centre.

Dr. Armstrong says, "I have never seen the central depression absent in smallpox, and, what is remarkable, I have never seen it present in chickenpox." My own practice confirms this observation; and I think that most medical men must have observed the uniformity of the central depression in smallpox. The inference I would draw is, that smallpox at all times attacks the same structure.

At the earliest stages of the eruption of smallpox, it is generally first seen in the hands and face, where small red spots indicate the inflamed state of the cutis. On these spots a small, round, hard tumor may be perceived by the touch, before it becomes visible. In twenty-four hours, it is still more distinct. It gradually changes its form until the third or fourth day, when it is perfectly circular, with a flattened top, in the centre of which an indentation may be perceived, resembling, it has been remarked, "the impression made in the skin with the head of a large pin." The vesicle is then about the eighth part of an inch in diameter; it is of a cellular structure, and filled with lymph somewhat turbid, and finally purulent. By the fifth or sixth day, its size has augmented to twice its former diameter. The central depression is commonly evident on the second or third day in some of the pocks, where they are numerous. Dr. Munro, in his *Observations on the Smallpox*, remarks, that "the central clear part of the pimple is evidently depressed on the fourth or fifth day: this depression is not to be perceived in all the pimples in the same light; but, by turning the body, it can be seen in those vesicular pimples in which it had not been previously perceptible. This fact is generally overlooked, and has often led to the denial of the existence of the central depression when it was present."

There may be cases in which the central depression is not perceived without much difficulty; but, if the pustule be carefully examined by a microscope, and in a proper light, it will be discovered. It is most manifest when the internal fluid is clear, and is essentially different from the depression

in other eruptions, which exist only after the apex is encrusted. As the disease advances, a red ring shows itself round the circumference of the pustule, and becomes wider as it increases in size. There is a remarkable appearance of the pustule on the sixth or seventh day, which was pointed out to me by Dr. Marshall Hall: there is an external ring of rose colour, in which is another ring of white, evidently rendered so by the colour of the contained fluid; within this is a third ring, which is red, and has an appearance as if the surface of the pustule was in contact with the flesh beneath; and in the middle of this there is a portion which again looks white, but is dull and cloudy. These appearances I have constantly observed about the sixth or seventh day. After the seventh or eighth day, the pustule loses its indented character, and becomes nearly spherical. If it be opened, it will be found to contain pus; and not only the small sebaceous gland, which was at first merely inflamed and enlarged, has become disorganized, but all these small glands within the circumference of the pustule have partaken of this disorganization, and a slough is formed nearly of the size of the base of the pustule. A portion of coagulable lymph is thrown out around the slough; and this I am inclined to think is what Mr. Cruikshank supposed to be a membrane situated between the rete mucosum and cutis, and which he has called the membrane of smallpox.

Mr. Cruikshank describes this vascular membrane as situated between the rete mucosum and cutis, and which he had injected in the skin of persons who had died of the smallpox. During the summer months he macerated in water pieces of smallpox skin, which had been kept for some time in spirits, and he says "the cuticle and rete mucosum were turned down, and, upon the eighth or ninth day, I found I could separate a vascular membrane from the cutis." There is little doubt but this was the vascular network described by Bichat, which Mr. Cruikshank had injected, and, in consequence of the effusion of lymph which I have previously described, he was enabled to separate it in the form of a membrane.

From the back of a patient who died of the smallpox I removed a portion of skin covered with pustules, which I macerated in water eight or ten days. I succeeded in removing the cuticle from the pustules; these still retaining their form, and being covered by another membrane. But, in the present doubtful state of our knowledge as to the existence of the rete mucosum in the white races, I found some difficulty in deciding whether this was the rete muco-

sum, or only a layer of coagulable lymph effused at an early period of the formation of the pustule, and subsequently raised with the cuticle by the pus contained in the pustule. Dr. Armstrong has this preparation.

Mr. Cruikshank found that in the centre of the pustule of smallpox there was a white substance, which he could not inject; and this Mr. Hunter said was a slough formed by the variolous inflammation. He thought it was always to be found in this disease, and that it was a circumstance by which it might be distinguished. In most cases it does exist, but I believe there are some exceptions. Upon this subject, however, I cannot speak decidedly, as I have never had an opportunity of minutely examining that kind of pustule. The cases to which I allude are those of modified smallpox, particularly as occurring after vaccination. Here we have an inflammation of a more moderate kind, and partaking more of the adhesive character. Lymph is poured out, which gives a peculiar hardness to the pustule, and, as the eruption subsides, a small tubercle is left. The lymph, however, is again absorbed, and the hardness and swelling are gradually removed. If these pustules were examined at any period, I do not think the slough would be found.

The parts around the nipple, particularly in the female, seem to afford the best place for the examination of the structure of the smallpox pustule, as the sebaceous glands there are more conspicuous than in most other parts of the body. In order to investigate it to the greatest advantage, it should be done at an early period of the eruption, and before the disorganization of the parts takes place.

If I have succeeded in showing that variola and varicella always attack different structures, I shall have established a fact which will be useful in any further investigation of this subject. If the seat of the smallpox be ascertained to be the sebaceous glands and mucous follicles, something not immaterial is added to our knowledge of the disease: there is a foundation laid for future inquiry.

There are many other points of difference between the variolous and varicellous affections, which are known to those who have considered this subject, and must not be overlooked; but I have been rather desirous to draw the attention to those differences which prove that the two diseases attack different structures.

The minute anatomy of the parts affected has been so neglected, that our knowledge of the progress of the variolous pustule is but imperfect; and this is a result of the importance of that knowledge not being thoroughly un-

derstood. The varicellous vesicle is hemispherical and inelastic; it is easily broken, and, being once opened, it empties itself entirely, and never fills again. The varicellous pustule is circular and elastic, and, if an opening be made in it, and some matter be taken from it, the pustule will nevertheless again soon be distended as fully as before; and this is evidently a consequence of its cellular structure.

Since writing the above, I find that I have been anticipated in these views by M. VELPEAU.* I cannot say that I do not regret this circumstance; but, in the midst of this regret, I have great satisfaction in finding the views themselves established on the firm basis of that gentleman's well known talent for pathological observation; and, as my mode of proceeding in this investigation has been rather different, I do not think I ought to suppress my own paper on this interesting subject. It is something to have thought and observed the same things with M. Velpeau.

Kentish Town; August 1829.

HYSTERITIS PUERPERALIS.

Cases of Hysteritis Puerperalis. By JAMES PAXTON, Member of the Royal College of Surgeons in London.

Mrs. B., æt. twenty-eight years, of a florid complexion and sanguineous temperament, had been married ten years, but had never been pregnant till the present year. The usual time of utero-gestation was passed without any of that troublesome sickness, or derangement of health, so often attendant on it. On the 21st of November, 1828, labour commenced: the process went on favorably and naturally, and at the end of four or five hours Mrs. B. gave birth to a well-formed female child. The placenta was expelled, with very little assistance, in a quarter of an hour afterwards. Quietness and composure were enjoined; but the injunction was not complied with: for the gratification of having become a mother after the lapse of an almost hopeless term of years, appeared to give rise to an excitation too powerful for the due exercise of the vital functions. In half an hour, distressing symptoms of hysteria came on, as screaming, sense of suffocation, pale cadaverous countenance, clammy sweats, and coldness of the extremities. On examination, there was found considerable uterine discharge, and a great sense of exhaustion followed.—Wine and water was given, and Ammonia cum Tr. Opio ℥xl.

* Bull. de Soc. Philomath. Juin 1825, and BATEMAN'S Synopsis of Cutaneous Diseases, by Dr. A. T. THOMSON, p. 269.

22d.—The patient had a quiet night; but this morning she complains of pain in the loins and tenderness about the hypogastric region. Passes water frequently, but in small quantities, and there is a very considerable lochial discharge. Pulse 125; tongue dry; thirst; surface hot and dry, and looks pallid.—Calomel gr. viij. statim, et Haust. Salin. quartis horis.

23d.—Had copious alvine evacuations; less pain, some sleep; pulse 120.—Pergat in usu medicamen. præscript. sine Calomelane.

24th.—Complains of headach; has had chills, alternating with flushings of heat; acute and permanent pain in the same situation as above described. When pressure is made, there is extreme tenderness of the abdomen, but no tension; there are also wandering pains over the whole body. Uterine hemorrhage continues.

25th.—Haust. Inf. Rosæ cum Magn. Sulph. 3i. quartis horis.—There is some abatement of the former symptoms. Large coagula were expelled from the vagina during the night.—Haust. Infus. Rosæ cum Acid. Sulph. dil. quartis horis. Ol. Ricini 3vi. statim.

28th.—Up to this period no material change has occurred. The pulse is small and frequent; tongue covered with a light brown fur on the back of it; temperature of the skin beyond the natural standard; perpetual desire to void the urine, which is scanty, deep coloured, and turbid. Lochial discharge continues in considerable quantity. No milk has been secreted. Complexion sallow. On some occasion the patient was removed from her bed, when syncope and clammy perspiration alarmed her attendants. She has no appetite, but is thirsty. There is some degree of fulness and uneasiness in the abdomen, but not amounting to pain, unless pressure is made with the hand, which discovers the uterus to be thrice its unimpregnated size.—Emp. Canth. supra regionem hypogast. applicandum. Pergat in usu medicamen.

December 3d.—Some relief was procured: the pains were very much diminished; and, on the whole, it may be said that the train of unpleasant symptoms and constitutional disturbance is subsiding. Pulse 105. Sometimes small doses of Ammon. Subcarb. was exhibited; at others, effervescing medicine and occasional doses of Ol. Ricini.

This state of things continued, with little variation, till the 8th, when marked rigors, sweats, and diarrhœa, suddenly, and certainly unexpectedly, supervened. Wine and opiate confection were administered; but the following

morning (the 9th,) respiration became laborious, the sight dim, mind wandering, pulse scarcely perceptible; profuse colliquative perspirations bedewed the body; and in the night the patient expired.

Sectio cadaveris.—The body was examined about twelve hours afterwards, in the presence of Dr. KIDD. The liver, stomach, and intestines, exhibited no morbid affection of any kind. There was no effusion or unhealthy appearance of the peritoneum. The disease was found to be limited to the uterus: this organ was five inches in diameter; its peritoneal covering had some slight pencilling of vascularity; but its internal structure had undergone very extensive change. The whole inner surface was of a dark crimson and livid hue; the cervix was completely gangrenous, and gave forth a highly offensive vapour.

The second case occurred on the 24th of May, 1829, on which day Mrs. H. fell in labour with her second child. A midwife attended her for fourteen hours; the membranes were ruptured, and very considerable hemorrhage took place, producing great faintness. A medical gentleman (Mr. TOMES) was therefore called in, who, very properly, immediately adopted an opposite plan to that which had been hitherto pursued. Instead of warm stimulants, with which she had been plentifully supplied, he ordered cold liquids, and sulphuric acid with infusion of roses. This succeeded in suppressing the hemorrhage. The pains were trifling. On examination, the hand of the child was found to have fallen into the vagina. Mr. Tones then requested my attendance. I advised the extremity to be replaced, and the child to be turned; but, from the rigidity of the uterus, its powerful contraction, and from the large size of the child, there was a delay of several hours before this object could be accomplished. The feet were at length brought down, and the body and head were then delivered without difficulty. The placenta was not long detained. A sense of excessive fatigue and faintness immediately succeeded, and a recurrence of hemorrhage.—Took Tr. Opii ℥xl.

25th.—The patient was very restless, sighing, and experienced great pain in the back and hypogastric region. Pulse 140.—Calomel gr. x.; Opii gr. ij. statim. Haust. effervescens quartis horis.

26th.—More comfortable; pulse 110. But in the evening, chills and cold perspirations were frequent, and the

pain increased.—Calomel gr. viij.; Opii gr. ij. statim. Pergat in usu haust.

27th.—The patient feels less pain, and has had some sleep.—Pergat.

28th.—Passed a restless night, and the pain has returned with greater violence. There is a sense of exhaustion, fainting, anxiety, and general uneasiness: in particular, pain over the uterus, which was increased on the most moderate pressure; but there is no abdominal tension. Lochial discharge in considerable quantity.—Applicentur Hirudines xx.

Somewhat relieved; but the circumscribed swelling and tenderness at the lower part of the abdomen continue, and in the evening complained of great pain and tenderness about the os uteri, rigors or heats, depression of spirits, and general uneasiness.—V.S. ad 3xxiv. Haust. efferves. cum Ant. Tart. gr. $\frac{1}{4}$ tertiis horis.

The blood drawn exhibited marks of inflammation. The pain and sensibility, however, was much diminished, and from this time there may be stated to have been a rapid amendment, until the 6th of June, when a slight attack of phlegmasia dolens supervened, and protracted the cure for three weeks longer; since which the patient has been free from complaints, and, indeed, about her domestic occupations.

The reflections I make on a comparison of these cases are,
1st. That copious depletion is the most powerful means of subduing inflammatory action of the uterus.

2d. That uterine discharges have no effect in relieving that organ, when suffering under inflammation.

3d. That neither the faintness experienced by the patient, nor even uterine hemorrhage, or weakness of the pulse, should have any weight on the mind of the practitioner, so as to prevent his carrying local or general bloodletting to its requisite extent: for if there is fever, with constant uterine and general pain, this is the true criterion for forming a judgment of the propriety of the measure, and not any other consideration whatever.

Oxford; July 16th, 1829.

DR. BALLINGALL'S CLINICAL LECTURE.

Review of some of the Surgical Cases which have lately occurred in the ROYAL INFIRMARY of EDINBURGH. A Clinical Lecture, delivered to the Students of Surgery in that Institution, on Thursday, 26th February, 1829, by GEORGE BALLINGALL, M.D. F.R.S.E.; Fellow of the Royal College of Surgeons, Surgeon Extraordinary to the King, Regius Professor of Military Surgery in the University of Edinburgh, and one of the Surgeons to the Royal Infirmary.

(Concluded from p. 103.)

THE next case to which I would solicit your attention is one altogether of a different nature, and which too seldom occurs so opportunely as to afford the students of public hospitals an opportunity of seeing the operation required in it. On the 4th of January, Elizabeth Thomson, æt. forty, was admitted with strangulated inguinal hernia, and the following detail of circumstances recorded in the journal:

“Has had a reducible inguinal hernia for nine or ten years, but within these last ten days it has become strangulated. Nausea and vomiting of stercoraceous matter has supervened. Much pain and debility is complained of.

“The operation was performed by Dr. Campbell, the stricture divided, and the gut reduced; to which was attached two or three diverticulæ of the intestine.

“5th.—Was bled to about fourteen ounces. One copious stool from injection; slept well; pulse 100, rather sharp; abdomen not tender; complains of slight nausea and soreness of the wound. Had castor oil this morning. Tongue moist.

“6th.—Pulse less sharp; tongue moist; slept well from anodyne draught; copious stool from injection last night; feels much easier this morning, and makes no complaint of pain.”

From this period her cure went on progressively, and she was dismissed on the 26th of January.

The appearance of the diverticulæ or appendices to the intestine, which were seen at the time of the operation, constitutes one of those unforeseen circumstances which we are constantly meeting with in operations for strangulated hernia, and for which you should never be unprepared. But one of the most remarkable circumstances in this case was, that, notwithstanding the long continuance of the symptoms of strangulation, the tumor itself was by no means tense or inflamed: on the contrary, it felt rather flaccid, and not particularly tender to the touch. Dr.

Campbell, however, very properly determined upon an immediate operation, seeing that the woman's bowels had been obstructed for five days, and that he could make no impression on the tumor by the taxis. The patient was upon the operating table in less than half an hour after her admission into the house, and the beneficial effects of this promptitude you had an opportunity of witnessing. The functions of her bowels were speedily restored; the wound healed kindly, and in three weeks she left the house cured, adding another to the large proportion of successful results which we have experienced here from this operation within the last few years.

On the 11th of this month, a case of disease presented itself in another female, which has been of very rare occurrence during my connexion with the house: I allude to that of Betsy Dodds, æt. forty-one, who was admitted with scirrhus of the os uteri, and of whose situation the following particulars are detailed :

"States that about ten weeks ago she had stoppage of the menses, which was accompanied with severe pains shooting up the back from the situation of the uterus, also with bearing-down pains. These were always worse during the night. At the commencement of this attack, her health was considerably impaired. These lancinating pains still continue in the lower part of the abdomen, but more especially in the back. She now menstruates pretty regularly. She is married, and has eight of a family. She had the last child about four years ago. Has had no miscarriages."

On the 12th, Mr. Liston removed the os uteri by excision, and the part amputated was shown to you at a subsequent lecture. "There was oozing of blood to the extent of nearly a pound after the operation; she had also faintness and vomiting, with considerable pain in the uterus. The bleeding was stopped by the application of cloths dipped in cold water to the pubis; and she had an anodyne draught at bedtime, which was rejected by vomiting."

For some days after this, she had some quickness of pulse, thirst, and other febrile symptoms, with pain in the back. The sore was examined with the speculum two days ago, and found to have a healthy appearance.

In the few remarks which I offered you upon this case, I referred to the recent papers on the partial or total excision of the womb in various periodical works, and noticed particularly the statements of Lisfranc, which abundantly prove the safety of such operations, whatever may be thought of their general expediency; but, as I can afford you no fur-

ther information on this subject from my own experience, I would refer you again to the valuable observations of Hesse upon excision of the womb, where you will find numerous details of this operation, as performed by Osiander and other eminent practitioners abroad: you will also do well to consult the writings of Lisfranc, of Paris, and of Blundell and others in this country.

Among several other cases of lithotomy, you had an opportunity of seeing a very large stone removed, by Mr. Liston, from the bladder of Janet Alexander, æt. thirty-eight, who was admitted on the 13th of November, and whose case is thus detailed in the journal:

"Has been troubled for the last four years with frequent desire to pass urine, which contains a good deal of sediment. Has most pain when bladder is empty. At commencement her urine was bloody. Has at times violent pain in her back. Has occasionally passed portions of gravel. On sounding her, a stone of pretty large size was found. Belly costive; health rather declining; catamenia regular. Had her last child two and a half years ago.

"16th.—Mr. Liston removed the stone today, which was found of a large size, (so much so, that he required for its extraction to make an incision upwards and outwards on both sides.) A tube was introduced. Has passed a quiet night; slept much; skin moist; urine flows freely through the tube.

"17th.—Passed a quiet night; little pain; urine flows freely through the tube; belly not open—Ol. Ricini ʒi.

"Did not sleep well; complains of some uneasiness about abdomen. Had an enema, by which her bowels were freely evacuated, since which she is easier. The tube was removed yesterday; urine flows in good quantity; pulse 100, skin moist, tongue moist.

"24th.—Continues to do well; sleeps pretty well; belly open; water is not retained yet; wound looks well; skin cool, pulse ninety-six; appetite improving.—Steak ʒiv. Vin. Hispan. ʒiv. daily.

"28th.—Is doing well, but is unable to retain her urine."

On the 3d of December she was dismissed, but with some incontinence of urine.

The operation for stone, you are all aware, is much less frequently required in the female than in the male subject, and of late we have had a number of cases recorded in which stones of a very large size have been removed by dilatation of the female urethra, without the use of cutting instruments. Many of these cases have been detailed appa-

rently for the purpose of showing that the use of the knife is here altogether superfluous; but, from what I have seen of the practice of lithotomy in the female upon the present and upon two former occasions, I cannot believe that the sufferings of the patient, either present or remote, are at all to be compared to those occasioned by the forcible dilatation of the urethra. In the case now under consideration, the removal of the stone in its entire state by the dilatation of the urethra would, I believe, have been altogether impossible.

In the very extraordinary case of Andrew Leechman, æt. seventy, Mr. Liston gave you an opportunity of seeing the employment of an apparatus lately much used in France for the purpose of breaking down stones in the bladder. As this case is intended for publication I shall offer no comments upon it, but shall merely transcribe the following particulars from the case-book:*

"States that he has laboured under the following symptoms for five months: pain at the point of the penis; when making water in a full stream, it sometimes stops suddenly; has frequent desire to pass his urine, which, after any great exertion, is mixed with blood. There is a considerable deposit of mucus when urine is allowed to stand. Passed a small stone on Saturday.

"On introducing a sound, a stone is distinctly felt; prostate gland healthy; no pain in back; has always enjoyed good health; says that two years ago he made his water frequently, but without pain.—Descend. in baln."

On the 13th of November, three days after his admission, "Civiale's instrument was introduced yesterday by Mr. Liston; but, from the irritable state of the bladder, (though a solution of opium had been previously injected,) he was obliged to desist, without grasping the stone completely. Several small fragments, however, came away within the fangs of the instrument, and during the course of the night several pieces of stone have been passed. There was no bloody urine after operation, nor has he passed a worse night, but slept better than for some time past.

"15th.—Passed a barleycorn this morning, encrusted with calcareous matter; urine much improved.

"16th.—A small piece of wood was passed, with the same appearance as the barleycorn. Complains of pain in the scrotum.

"18th.—A small abscess which had formed in the scrotum was opened."

* London Medical and Physical Journal, May 1829, p. 412.—Ed.

On the 25th the instrument was again introduced, the stone was fairly laid hold of, but was so soft that it was crushed by the instrument, in withdrawing which several fragments of seeds were found adhering. Subsequent to this he passed several fragments of stone, having entire barleycorns for their nuclei. He now confessed that, while reaping last harvest, he had introduced a number of barleycorns into his urethra, but would not say for what purpose.

On the 19th December James M'Donald, a delicate looking boy of about ten years of age, was sent over from Perth to undergo an operation for the stone, and was admitted under my care with the following symptoms: "Complains of great pain in voiding his urine, more particularly towards the end of, and immediately after the evacuation, and there is a considerable quantity of mucus and blood occasionally mixed with his urine. On introducing a sound, a calculus can be distinctly felt. The disease is of three years' standing, and the symptoms have been gradually becoming more severe." Two days after this he was placed upon the operation-table; but, after a very strict and rather protracted examination, no stone could be felt with the staff, either by myself or any of my colleagues, and I was reluctantly compelled to send the patient to bed.

He was sounded in the consultation-room a few days afterwards, but without our being able to feel the stone; and, after each of these examinations, he passed large quantities of calculous matter, leading me to conjecture that, although the sound could not be distinctly felt nor heard to strike the stone, that it had detached this gritty matter from its surface, or had perhaps broken it completely down.

On the 9th of January he was sounded again, first with a steel catheter and afterwards with a small-sized sound, with which latter instrument the stone was distinctly struck by Mr. Liston, and afterwards by myself.

The little patient was brought into the theatre on the following day, and the operation performed with a grooved staff and a common scalpel. It was very gratifying, after the circumstances detailed in the history of this boy's case, to find that I was ultimately enabled to extract the stone with as much ease and expedition as I could ever desire. The patient recovered without a single bad symptom, and in three weeks was sent home cured.

The stone extracted from M'Donald is about the size of a large almond, and consists apparently of uric acid. It was, I am persuaded, on his admission, encrusted with an adventi-

tious layer of the mixed phosphates. This I am induced to believe from the very large quantity of calculous matter passed after each examination, amounting, I am assured, to more than a dessertspoonful in all; and also from the different and more obtuse sound occasioned in striking the stone at the first examination, compared with the distinct stroke which was heard by all the by-standers at the time of the operation.

In reflecting upon the cause of our being unable to feel the stone upon two occasions, I am inclined to think that something was attributable to using too large a sound, which, being grasped by the urethra and sphincter of the bladder, did not move freely within it; and although it was subsequently changed for a smaller instrument, yet the bladder, having been previously irritated by the presence of the larger one, was probably excited to a spasmodic action, which impeded the discovery of the stone.

In my comments upon this case, I noticed various circumstances which occasionally render the detection of stones difficult. I mentioned a case of my own, where, although the stone was of a very large size, it was very indistinctly perceived by the sound, and we were only satisfied of its existence by feeling it through the abdominal parietes. I stated to you also the outlines of the case of a scientific gentleman in London, who was repeatedly sounded by some of the most eminent surgeons of the day, but not one of them could positively say that he felt the stone, until, in consequence of an accident, it was dislodged from the fundus of the bladder where it had hitherto lain, and was very readily detected by the sound. The same accident, however, which led to the satisfactory detection of a large calculus, led, in that instance, to the death of the patient within a few hours afterwards; and, upon dissection, a ruptured membranous rim was found surrounding the fundus of the bladder where the stone had been lodged.

It is not, however, in subjects of the age of M'Donald that occurrences of this kind are generally met with, and I stated, perhaps too strongly, that sacculated stones are seldom or never found in such young patients. A very remarkable case to the contrary, and one very creditable to the surgeon concerned, has since been given to the world by Mr. WICKHAM, of the Winchester Hospital;* and it is not impossible that something of the same kind may have existed in a case of my own: for I mentioned to you that it had happened to me, as well as to some more eminent surgeons, to have once cut into a patient's bladder without

* London Medical and Physical Journal, February 1829, p. 130.—ED.

finding a stone. In the case to which I allude, the young gentleman rapidly recovered, and the mystery remains undeveloped; but into the particulars of that case I do not propose to enter: for, in my opinion, a surgeon never appears to less advantage than when, after a disappointment of this kind, instead of frankly acknowledging his error or regretting his misfortune, he enters into a tedious and hypothetical explanation, which seldom satisfies any one but himself.

Amongst other cases of disease of the urinary organs, the following very remarkable one presented itself on the 31st of October, in Walter Hay, æt. forty-five. "About two months ago was cut in the hospital for fistula ani, and discharged almost well. He now complains of a difficulty in passing his water, the half of which he states to be discharged by the anus. A large catheter may be easily passed into the bladder; the right lobe of the prostate is found to be enlarged and hardened, and is very painful when pressed between the catheter and the finger in the rectum."

After a few days' respite, during which the fact of his passing large quantities of urine by the rectum was fully ascertained, the case was accurately examined, and "the orifice of the sinus between the urethra and rectum was distinctly seen by means of the speculum ani: a probe was readily passed through it, and made to grate upon a catheter previously passed into the bladder."

On the following day, the 10th of November, the patient was brought into the theatre, and a full-sized catheter attempted to be passed, but, from the swelling and tenderness in the urethra, consequent upon the examination of the preceding day, it met with obstruction in the perineum, and could not be made to enter the bladder. Knowing, however, that the patient evacuated a great proportion of his urine freely by the natural passage, I was induced to persevere in my purpose of cauterizing the callous edges of the fistula, which was done with a red-hot iron, the rectum having been previously dilated with the speculum.

"On the 11th, "more water" was reported to be "passing by the urethra, but he complains much of pain from pressure on the back part of the urethra, and about the anus." Fourteen leeches were applied, with relief; and on the 13th the following report was entered:

"Last night, as the pain and irritability of the urethra had very much abated, an elastic catheter, No. 12, was secured in the bladder," and he took an anodyne draught, with eighty drops of laudanum, at bedtime.

On the 14th, he was reported to have "passed a tolerable night, and experiences less pain from the catheter; pulse natural, tongue slightly furred; bowels relieved once; no water appears to be discharged by the anus." After this period the whole of his urine was expelled through the catheter, which lay in the bladder for about a fortnight or upwards: at the end of this time it was withdrawn; a puriform discharge, occasioned apparently by its presence in the urethra, gradually subsided, and on the 6th of December he was dismissed cured.

This belonged to a class of cases of all others the most troublesome in their treatment, and but too often unsatisfactory in their results. The cure from a single application of the cauterizing iron was more than I anticipated, and was no doubt greatly facilitated by the free and pervious state of the urethra, and by our being enabled to introduce a full-sized catheter into the bladder soon after the application of the cauterizing iron, before the eschar occasioned by it was detached. But, while this open state of the natural passage obviously contributed much to the cure, it presents to me a very considerable difficulty in accounting for the formation of this fistulous opening, which was more than an inch within the extremity of the gut.

Amongst the diseases of the vascular system, you have, during the present course, had an opportunity of seeing, under my care, two cases of temporal aneurism from arteriotomy, one of these occurred in a patient under treatment for another complaint; was of a very small size, and was cured by compression. The other that of Bernard M'Kenzie, æt. twenty-eight, is thus noticed in the journal: "Admitted on the 8th of December with a small aneurism of the anterior branch of the temporal artery. The swelling is about the size of a nut, of a livid colour, and pulsates very distinctly. Disease is the consequence of the bandage having been too soon removed after arteriotomy, practised about three weeks ago."

After having tried the effect of a hard compress over the tumor for several days without any obvious benefit, I was induced to remove the whole of it by an elliptical incision, including a small portion of the surrounding integuments. The inferior or proximal extremity of the artery bled freely, and was secured by a ligature, and the surface of the wound covered with a dossil of lint. On removing this some days afterwards, the sore appeared covered with healthy granulations, and the healing process went on progressively until the 2d of January, when he was dismissed cured.

The aneurism in this case appears, from the preparation which I now show you, to have been of the kind termed false, originating from a wound in the coats of an artery. You may here see a bristle passed through the caliber of the vessel, and a coagulum of blood lying contiguous to it, in a cyst formed of condensed cellular membrane.

This is, so far as my observation goes, the common description of aneurism arising from bleeding in the temple, nor have I indeed seen any other from this cause; but it is stated that this aneurism sometimes assumes a cellular form, and puts on all the characters of aneurism by anastomosis, a disease which is always most successfully treated by the excision of the whole tumor, where it is limited in extent and distinctly circumscribed.

In a case, however, like M'Kenzie's, I am disposed to think that the simple division of the arterial branch above and below the tumor, with the subsequent application of a compress, would prove not only an equally efficient, but also a speedier means of cure.

The frequent occurrence of these swellings, and the trouble and danger which occasionally arise from them, ought to render you careful in the adjustment of the compress after arteriotomy; an operation now become so common, that it is thought altogether below the notice of an experienced surgeon, and is often left to young men quite unacquainted with its vexatious results.

As a sequel to these cases, I would next mention that of James Paulin, æt. forty, who was admitted on the 16th of January. This man had come in from Berwickshire, greatly dissatisfied with the treatment of some of his medical advisers, and anxious to submit to any operation which might be deemed necessary for the cure of some "varicose veins in his right leg, which he first observed about six months ago, and which he attributed to constant riding on horseback. The saphena vein below the knee became first affected, and he has occasionally pain in the course of that vessel, and in the groin. There is much swelling of the veins below the knee, and considerable œdema of the leg. General health good; bowels slow."

Having given him a few days' rest after his journey, and administered some laxative medicine, I determined upon making trial of the mode of cure by caustic, lately recommended to the notice of the profession by Mr. MAYO, of the Middlesex Hospital; not, however, I own, without many doubts of its success; for, as I explained to you in lecturing upon this case, I was afraid that the caustic, like

some other practices, would either do too little or too much; that it would either fail of the desired effect or excite an active inflammation within the vein, the danger of which you have all been made acquainted with.*

On the 20th of January, a portion of caustic potass was made into a paste with soft soap, and applied over the course of the vein a little above the knee, its action being circumscribed by a piece of adhesive plaster previously fixed upon the thigh, with an oval aperture in it for the admission of the caustic. After having been allowed to remain for about seven hours, it was removed, and an emollient poultice applied; the eschar separated in about ten or fourteen days afterwards, and left the trunk of the vein exposed in the bottom of the wound to the extent of upwards of an inch; it was also to be felt hard and swollen for about an inch below, and about two or three inches above, the site of the eschar. The portion of it laid bare was expected to slough, it being seen black and apparently dead in the bottom of the sore: this, however, did not take place; the granulations, which were florid and healthy, gradually encroached upon it, and covered it over. The man now became impatient to leave the hospital, and to return to his home, expressing much gratitude for what had been done, and being satisfied that he was to obtain an effectual cure. He was with difficulty detained until the 13th instant, at which time the sore was cicatrising rapidly; and, what was remarkable, although the principal dilatation of the vein immediately below the knee did not appear to be much diminished while the limb was at rest, yet no sooner was it put in motion than the blood began to circulate freely through the collateral veins, and the swelling to disappear.

I am now, gentlemen, according to the established routine of attendance in this house, about to relinquish a duty, than which I have never discharged any other with more gratification to myself. The practical mode of instruction which best befits this chair, is one the most consonant to my taste and to all the habits of my life. Could I presume to think that our connexion as teacher and student had been as in-

* We have recently witnessed the treatment of several cases at the Middlesex Hospital, under Mr. MAYO's direction, by the method here referred to. In no instance that we have seen has inflammation of the vein, or any other bad consequence, ensued; while the cavity of the vein has been uniformly obliterated at the part where the caustic has been applied. By what process this takes place is obscure. Mr. Mayo applies the caustic paste at several points upon the varicose vein or veins, so as entirely to shut them out of the circulation.—EDITORS.

structive to you as it has been agreeable to me, I should then retire with the conviction of having accomplished a great public good, and of having contributed largely to the education of young men, who require only to have their studies well directed, to ensure their becoming useful members of their profession and blessings to society. But, gentlemen, when I look to the very extended experience and deep research which the surgical pupils of this hospital have long been accustomed to witness in the professor of clinical surgery, I cannot but fear that I may have come far short of the mark: you will, however, permit me to say that, in so far as my experience could be brought to bear on the cases under consideration, it has been fairly laid before you. But, while I have ever been most anxious to discharge my duty to the patients in this house, and to the students of this class, I have never made any display of a questionable zeal, nor have I any affected enthusiasm to support. Why, then, gentlemen, should I hesitate to avow that I now look forward with pleasure to the appointment of consulting surgeon, as one demanding less continued attention, and as one fairly earned by three-and-twenty years' employment in the responsible, and often laborious, duties of hospitals? I have no right, however, to promise myself any thing like a respite from my labours as a teacher. I must not forget that there is another body of young men, the students of military surgery, who have every claim to my best exertions, and to whose behoof I am bound to turn the extensive field of observation which still lies open to me as a consulting surgeon of the house. As a consulting surgeon, I shall still enjoy many valuable opportunities of adding to my own stock of experience, and of contributing to their information; as a consulting surgeon of this house, I shall ever retain a warm interest in the treatment of its patients, as well as in the instruction of its pupils; and, whenever you or your successors shall give me an opportunity of showing such interest, you will not, I trust, find me forgetful of the kind and respectful attention with which I have uniformly been honoured by the students of clinical surgery.

LITHOTOMY.

Case of Lithotomy; the Stone situated behind the Os Pubis.

By T. HODSON, Esq. Surgeon.

HAVING read Mr. WICKHAM's case of lithotomy in this Journal for February last, I am induced to send you the following case, which, although the operation was finished

in the course of a few minutes, might have proved very tedious and distressing both to myself and the patient.

Upon cutting into the bladder, and introducing the fore-finger of my left hand upon the cutting gorget, I perceived the stone behind the os pubis, and so situated that it would have been impossible to have taken hold of it with the straight forceps. I therefore immediately introduced the curved forceps upon the blunt gorget, and readily got hold of the stone; but, upon attempting to bring it down, the forceps slipped and let go their hold. This happened four or five times before I could succeed in bringing it down, when it was easily extracted, and the patient, who was about forty years of age, recovered.

The stone weighed three ounces, and was shaped like a heart, and, being situated behind the os pubis, with its apex downwards, the difficulty alluded to was readily explained; and, although the operation (as I have already observed) was finished in the course of a few minutes, it might, I conceive, have proved very tedious and embarrassing, in consequence of the stone being wedged in the arch of the pubis.

Lewes; June, 1829.

MESMERISM.

Experiments and Observations on Mesmerism. By RICHARD CHENEVIX, Esq. F.R. and E.S., M.R.I.A., &c. (4th Article.)

It is the duty of a conscientious narrator to relate, with equal frankness, every portion of his story; to give the testimony of all who depose against his doctrines, as well as in their favor; to record failure no less than success. In the present instance, however, this duty may be dispensed with, on account of the details into which it would lead me; and having, in a former article, premised that not more than one patient in six slept, or was sufficiently susceptible of the mesmeric influence to manifest convincing phenomena, I may spare my readers an enumeration of many experiments; telling them merely that, before I met with cases worthy of being submitted to the witnesses whose evidence I am going to adduce, I encountered many disappointments. Such is the fate of all who make researches upon mesmerism in its present state; and the happiest practical addition which could be made to the science now, would be some certain indication of mesmeric susceptibility, as nearly five-sixths of the labour would be abridged to all who could produce prompt and convincing results.

Being in Dublin on the 26th of March, 1829, I made

some experiments at the Hospital of Incurables there, by permission and in presence of Dr. CROKER, physician to the establishment. The first six patients exhibited no effects; at least, none which could convince an inexperienced observer. The seventh patient was *Mary Glynne*, a severe case of vomiting, originally caused by an injury. She was obliged to have the nurse and a crutch to enable her to come down stairs, as she said she could not come down without their assistance. She could, however, with the help of her crutch alone just walk from her bed to the fireside in her own ward. For the last two months she had excruciating pains in her left arm, which Dr. Croker feared was threatened with paralysis. I had never seen this woman before, and now only in the presence of Dr. C. I desired her to sit down, and, without any conversation whatever, mesmerised her for thirty minutes. She then, of her own accord, said that she thought herself better, and believed she could walk. She did so. I made her sit down again, and in fifteen minutes more she had *clignotements* of her eyelids, complained that she was too warm, and got up again to walk. This time she used no crutch, and declared (what, indeed, was notorious in the hospital,) that for two months she had not been able to do as much. She was mesmerised again immediately, and, after about sixty minutes, got up again, and walked quite well. The nurse and attendants, when called into the room, expressed the utmost astonishment at seeing her pace along without the least unevenness in her gait; and she went up stairs to her ward without any assistance whatever, leaving even her crutch in the room where she had been mesmerised.

Second; March 27th.—She said she had slept better last night than she had done for a long time, and continues to walk quite well. She complained of a stinging pain in head and hand; has long been unable to put her left hand behind her back. No effect was produced on it by mesmerism; neither was any effect apparent upon her this day.

Third; March 28th.—Continues to walk perfectly well, insomuch that two medical students, who had not seen her till now, could hardly credit that, but forty-eight hours before, she could walk only with a crutch, and that very badly. She did not sleep so well last night, on account of an eruption on her head, caused, as it was supposed, by the use of nitric acid. She felt heavy and drowsy today during the operation. Her left arm is not getting better. Saw her no more after this day.

The improvement produced in this case, though so much

yet remained undone, was most striking, and made a forcible impression upon all who were present, Dr. Croker and three private individuals. The plain and undeniable fact is, that, in about fifty-five minutes' mesmerising, this woman, deemed incurable, who for two months had not been able to walk without her crutch, and had been in violent pain, was enabled to walk alone without pain, and so well that even medical observers could not perceive any lameness. One more patient in this hospital was also strongly affected; but I pass over her case, to hurry on to the metropolis of science.

April 21st, at St. George's Hospital, London, I mesmerised two female patients, in the presence of Mr. BRODIE, Mr. SMITH, of the Coldstream Guards, and some other persons. The effect was hardly perceptible.

April 26th.—I had two patients at my own house, sisters, both epileptic from their childhood, and daughters of an epileptic father. Mary Ann was aged nineteen; Sarah, sixteen. The former had been mesmerised once, on the preceding day; the latter I had never seen before. I mesmerised them both this day, in presence of Dr. MILLIGAN and Mr. SMITH; but I shall confine my account to Sarah, whom I mesmerised for the first time. After a very few passes her eyes closed, and in about one minute she was in sound mesmeric sleep. She awoke when I spoke to her, was sickish in her stomach, and had a pain in her head. A few transverse passes removed her headach, but the sickness in her stomach remained. After the operation, Dr. Milligan declared his opinion to be that the somnolency produced upon this patient was the effect of a peculiar influence exercised by me; and that, on account of its suddenness, it could not be the result of any of the usual modes which produce sleep. Mr. Smith coincided in this opinion. I shall presently quote Dr. Milligan upon another occasion.

On the eleventh day of Mary Ann H. and the tenth of Sarah H., May 7th, Mr. BRODIE, Dr. PROUT, and Capt. BAGNOLD, were present.

Mary Ann H. appeared to sleep in about four minutes. In twenty minutes I woke her by speaking to her. She had a headach, which a few transverse passes, made with that intention, removed.

Sarah H. had a headach when I began, which a few transverse passes dissipated. Her eyes closed almost instantly, and in about one minute she was fast asleep. While she was in that state, I opened her eyelids, in order to show that the appearance of the eye was different from

what it is in waking persons. As these gentlemen were hurried, I awoke both these patients in twenty-two minutes. The opinion of Mr. Brodie, on seeing these experiments, was doubtful as to the reality of Mary Ann's sleep. The following conversation took place respecting her sister. I said, "Let me ask you two questions; but beware of your answers, for it is fair to tell you that I wish to have them for the express purpose of publication: Do you think this girl really and truly slept?" "I do, and very soundly too." "Do you think she went to sleep herself, out of fatigue or ennui, or, in short, by means of what you saw me do?" "Certainly by means of what you did." In a subsequent conversation, Mr. Brodie said that, though he did not doubt that sleep had been brought on by means of what I did, he saw no necessity for supposing the existence of any new agency; for the effect may be accounted for upon the same principle as giddiness, &c. produced by a quick rotatory motion.

Dr. Prout doubted whether Mary Ann really was asleep, but he had no doubt as to Sarah. He was by no means convinced, however, that my action was the cause of her sleep; though he did not immediately see to what other agency it could be ascribed. He added, that the circumstance of these girls having been so often acted upon before makes the subject still more doubtful in his estimation.

The opinion of Capt. Bagnold was, that both patients were asleep in three minutes and a half; and in this belief I perfectly coincided.

The fact is, however, that the appearance of Mary Ann was much more equivocal to persons who never before had witnessed mesmeric phenomena; while it was impossible to hesitate one moment respecting her sister. But let Mary Ann be entirely struck off the list of facts, Sarah still slept; and that she did sleep, is testified by the above highly credible witnesses.

The preceding statement was submitted to Mr. Brodie and to Dr. Prout for their approbation, and the following answers were returned in writing.

16, Saville row; May 13, 1829.

"My dear Sir: What I have to say on the subject of the experiments on the two girls which I saw made by you in Jermyn street, is as follows: I have my doubts whether the eldest of these girls really slept. I have no doubt that the other slept very soundly for several minutes, and until you awoke her. I have no doubt also that she slept in consequence of the means employed by you. With such information, however, as I at this moment

possess, I see no reason to believe that this girl's sleep may not be explained on principles already known; and I should think that it may be compared to the giddiness which is produced by turning round; or, still better, to the sleep produced by rocking a child.*

"Believe me to be, my dear sir, yours most truly,

"B. C. BRODIE."

"29th May.

"Dear Sir: I return your statement with some slight alterations, (which made it as given above, relating to Dr. Prout's testimony,) &c. * * I fear, on the whole, my evidence is rather against you; and I confess that I must see much more before I can be satisfied of the reality of mesmerism.

"Most truly yours,

N. PROUT."

On May 12th, the fifteenth time of Mary Ann, and the fourteenth of Sarah H., Mr. FARADAY and Dr. HARGOOD, both of the Royal Institution, were present.—Sarah H. complained of a pain in her stomach and head, which a few transverse passes removed. I then directed my intention toward producing sleep. After a pass or two her eyelids closed, and in less than two minutes she was asleep. While she was in that state, I raised her left eyelid, and showed the eye under it with the glossy and lifeless appearance which it generally assumes when she is in mesmeric sleep. In thirty minutes I awoke her, calling her by name.

Mary Ann slept in about three minutes, and very soundly. I uncovered her eye also, which was not quite so much affected as her sister's. In thirty minutes I awoke her. She had a violent headach, which a few transverse passes calmed.

Mr. Faraday's opinion was, that there was nothing in these phenomena which a good actor could not play. A circumstance which induced him to doubt the reality of the sleep of Mary Ann, was that she coughed, and put her hand before her mouth, as she might have done being awake. But it is a great error to confound mesmeric sleep with common sleep; for, in the former, many appearances are assumed which are incompatible with the latter. The second person I ever saw in the state of artificial somnambulism walked about the house, and performed many do-

* This is precisely the explanation of mesmeric sleep which we offered in our review of DUPAU on Animal Magnetism, in our Journal for November, 1826, p. 469; and we are, of course, confirmed in the opinion we then expressed by finding it supported by Mr. BRODIE. In speaking of this phenomenon, we observed "There is here no mystery: the effect might be anticipated. The magnetic fluid is not required. Upon the same principle, a child is lulled to rest by fatiguing its senses with some nursery lullaby, or some gentle and oft-repeated motion."—EDITORS.

mestic functions while in that state. In natural somnambulism the fact has long been acknowledged.

Dr. Hargood was struck at the promptness with which the pain in Sarah's head and stomach were relieved by the transverse passes made with that intention, before the operation for sleep was begun. He believed both sisters to be soundly asleep, but attributed all the phenomena which he saw to imagination. Both Mr. F. and Dr. H., however, considered these experiments as well worthy of investigation, and expressed their wish that the subject might meet with fair and candid inquiry.

May 16th, I mesmerised Mary Ann for the eighteenth time. Unfortunately, her sister, who was in service, could not come this day. The Marquess of LANSDOWNE and Dr. HOLLAND were present. In about five minutes the girl was asleep. I opened her eyelid, and showed the state of the eye under it, fixed, and with a dead and glassy appearance.* She was slightly disturbed by this experiment, yet she continued asleep. At the expiration of about twenty minutes I awoke her. I then put the same questions to Dr. Holland as I had put to Mr. Brodie; telling him also that my object was to have his testimony, be it what it might, for publication. "Do you think this girl was asleep?" "I do." "Do you think she went to sleep of herself, out of lassitude, ennui, or by means of what I did to her?" "Certainly I think that, without your means, she would not have slept." I asked the same questions of Lord Lansdowne, and received the same answers. Neither Lord Lansdowne nor Dr. Holland, however, admitted the necessity of any new agency to account for these effects.

This statement was sent to Dr. H. for his approbation, and his answer was as follows:

"Dear Sir: I return the enclosed paper, having nothing to object to the statement respecting the girl whom I saw at your house. I believe that she was asleep, and that she would not have slept but for the means employed by you.

"Most truly yours, H. HOLLAND."

May 19th, the seventeenth sitting of Sarah H. Drs. BABINGTON and B. BABINGTON present.—She slept in two minutes. I opened her eye, and pressed my finger hard upon the eyeball: she did not make the slightest motion. I then put my middle finger into her mouth as far as

* Mr. MAYO, who accidentally saw this passage in its way through the press, observed to us that, in a doubt between genuine and pretended sleep, the state of the pupil is a valuable criterion. In natural sleep, the pupil, according to Mr. Mayo, is always greatly contracted.—EDITORS.

I could, and stirred it about for more than a minute, endeavouring to stimulate the fauces: she showed not the slightest symptom of feeling any thing from this operation. I then tickled her nose and upper lip with a slip of paper, and put the same slip of paper up her nostril; but she did not manifest the slightest sensibility to the impressions which should have resulted in ordinary cases.

Dr. Babington said that, if long experience of the many impositions practised by the poorer classes in the hospitals had not put him upon his guard, he might be induced to give some credit to these appearances; but he wished to suspend his judgment until he could make some experiments himself, in which he would use every means to guard against deception on their part. I observed to him, that in this case there could be no motive for imposition, as the girl came to me every day from a considerable distance, without a hope of any remuneration but health. My wish, however, being much more to excite active curiosity than to impart supine conviction, most heartily do I hope that many will adopt the same mode of obtaining truth.

This statement was submitted to Dr. B. for his approbation. He confirmed it in writing; adding, that he had not yet had an opportunity of showing it to his son; "but I have no doubt that he will agree with me in finding it quite correct."

Dr. B. Babington has since written, to say that the two girls "did present the usual phenomena of sleep: I may even say, of profound sleep. This did not, however, appear to me to be induced by any new or extraordinary influence, and it seemed that the imagination, aided by the will, exercised a power over the faculties," &c.

On April 27th and 28th, I tried some patients at the Middlesex Infirmary in Great Pulteney street, but with little success.

April 29th, I mesmerised an epileptic boy. In seven minutes his eyes closed, and his head fell back; he did not entirely sleep, however. On coming to himself he felt a trembling, which I soon calmed. Mr. EVANS RIADORE, of this establishment, was present, but said he saw nothing which could authorize him to admit a mesmeric effect.

April 30th.—Mesmerised the same boy again. Dr. Milligan and Mr. Evans Riadore were present. No somnolency was produced; but in six minutes a tremor ensued, as yesterday, and the boy said he felt a fit coming on. I increased the intensity of the mesmeric action, with the intention of preventing the fit, but without giving him any

intimation of my purpose. In three minutes he said he was much better; and in two minutes more he said he was quite well, with the exception of a headach, which a few transverse passes, with an intention to demesmerise him, took away. During the tremor he became very pale, and after it, Mr. Evans Riadore found his pulse slower than before. Dr. Milligan, who had witnessed the first day's mesmerization of Sarah H., reaped new conviction from this patient. Yesterday, Mr. Evans Riadore had said to me, in conversation, that mesmerism seemed so repugnant to his reason, that he could not bring his mind to consider it at all. This day he exclaimed, "I have seen something to-day, I must confess, and I did not expect it. There certainly is something in all this, and I will try it in this very institution." "Will you sign this," said I, "and let me publish it?" He answered, "I will." To which Dr. Milligan added, "There is nothing which we say to you on this head that you may not publish."

The handsome manner in which these gentlemen avowed their conviction enhances its value. It is not every man who today will admit, even upon experiment, what yesterday he thought repugnant to his reason. Dr. Milligan and Mr. Riadore did sign this report, approved by them.

The experiments which I shall now relate were performed at St. Bartholomew's Hospital. On May 23d, Mr. EARLE was kind enough to allow me to accompany him to that establishment. The first patient submitted to trial was an epileptic young man, who at that moment was taking large doses of nitrate of silver. His fits were very bad and frequent. Though to all appearance this was a person likely to be affected by mesmerism, he manifested little susceptibility; so slight is yet the confidence to be placed in any prognostic relating to this unfathomed subject. Being pressed for time, I continued to operate upon this man only eight minutes.

The next patient was a woman afflicted with disease in her bladder. During the first five minutes no effect was manifested. She then said that she felt a fluttering in her inside. I observed to Mr. Earle, in a language which this woman certainly did not comprehend, "This is a mesmeric effect." Mr. Earle smiled doubtingly. "To convince you," continued I, in the same language, "I will now take this effect away." By altering my intention, and demesmerising the patient, without letting her perceive any alteration, I did calm those feelings. Still Mr. Earle doubted. "I will now," said I, "give her those sensations back again." After two minutes' mesmerising, they re-

turned. "I will now take them away again." I did so, and by the same means. Still, however, though Mr. Earle and a student of the hospital, who was present, acknowledged that the results most accurately corresponded with the intentions which I had announced, conviction made but little progress, so extraordinary did the facts appear; and had not good fortune thrown another patient in my way, on whom the effects were still more palpable, my labour at St. Bartholomew's would have been in vain.

This patient was a woman afflicted with iritis, for which she had been largely bled; and she was, moreover, recovering from a severe mercurial course. In less than two minutes' mesmerising, her head fell back, her eyes closed, and a kind of hysterical trance came on. In three minutes she awoke, said she felt hot, then cold, and a shivering ensued, particularly in her knees and thighs. This I stopped in about one minute, by continuing the mesmeric action in this intention, as I had announced to Mr. Earle in a foreign language. I tried the experiment of the piece of paper on her arm, but she felt it very slightly. Touched with the silver pencil-case, my intention being (as in the cases described in a former article) to give her a sensation of heat, she said she felt as if all the warmth of her hand had gone to that spot. I then demesmerised her, as she complained of much uneasiness; and, having made her stand up, I drew my hands down before her from the head to the very soles of her feet, at the distance of three or four inches, for about one minute and a half, with the intention of destroying the preceding effects. She then said that she felt better, and left the room much recovered. She declared that, in her life, she never had experienced any thing like what she had just felt; that she never had an attack of hysteria, epilepsy, or any nervous paroxysm.

This woman showed considerable susceptibility; and, had time permitted me to continue the treatment, I have no doubt that she would have become a remarkable subject. Mr. Earle assured me that he had witnessed sufficient effects to encourage him to continue the experiments on both these women, and recommended them, for that purpose, to two of his pupils who were present, and to whom I gave all the instructions in my power, pointing out to them the works in which the amplest details upon the modes of operating, together with the dangers and advantages of each, are given. These two gentlemen, also, were fully convinced that extraordinary effects had been produced.

These three patients were entirely selected by Mr. Earle, without my influencing his choice in any manner. I had

never seen one of them before, and now only in the presence of incredulous witnesses, eager for truth, who granted nothing that was not proved, and who were very fairly watchful to detect illusion or deception; and all can testify that no act or word of mine could, in the remotest degree, have conduced to intimate to those patients what my intentions were. They came into the room with their minds unsophisticated, unprepared for any result, for any impression; yet, as Mr. Earle saw, at the very first pass of my hand, the last patient began to manifest some of the symptoms so often described in every German and French work on the subject as among those which mesmerism produces; and in less than three minutes was violently affected. I must add that, at the time of operating, I was ignorant of the disorders under which the two female patients were labouring.

On the following day the operation was repeated on the third patient, by one of the pupils; and, in about seven minutes, still more violent convulsive effects were produced, and which lasted longer than on the preceding day. From their violence and duration, indeed, Mr. Earle would not permit the experiments on this patient to be carried to a greater extent.

When this statement was submitted to Mr. Earle, he returned the following answer.

"George street; May 28th.

"My dear Sir: In reply to your request that I would state my honest opinion of the trials which you made at St. Bartholomew's Hospital, I have no hesitation in saying that, in the first case, no effect was produced; that, in the second, the patient was under considerable alarm, in expectation that she was about to have her bladder examined, and that she said that she felt a fluttering in her inside, which abated for a time, and was reproduced, as you represent, on your repeating the motions of your hands. In the third case a very decided effect was produced; and it was reproduced the following day by my pupil. In making this acknowledgment, however, I am by no means prepared to say that the effects were any thing more than the influence produced upon the mind of an enfeebled patient by the mysterious movement of your arms, and her ignorance of the object of these movements. The circumstance of her erroneous sensations I have frequently observed after syncope.

"You will perceive, from these observations, that I am yet an unbeliever; but I am quite open to conviction, and will certainly repeat the experiments under less doubtful circumstances. Should more ample experience induce me to alter my opinion, you may depend upon hearing from me. Believe me, my dear sir, very truly yours,

"HENRY EARLE."

I shall at this moment refrain from making any observations upon the preceding testimonies, and the modes in which the medical gentlemen, who admit the facts, endeavour to explain them. The next article, which will be the concluding one, will contain the few trials which remain to be mentioned, together with a summing-up of the evidence. I must merely remark, that the convulsions of the third patient, when mesmerised by Mr. Earle's pupil, do not in the least surprise me; neither would they have deterred me from pursuing the experiment. I have never met with one case in which such accidents were attended with danger, provided the operator continued to act upon the patient with an intention of arresting their progress. It requires, however, some experience, and the confidence which practice gives, to enable the mesmeriser to preserve his calmness; and a person who witnesses such phenomena for the first time may, in common prudence, be deterred from carrying the operation any further. This experiment proves, too, that mesmerism is not a thing to be trifled with, and that its power of injury is not less than its power to do good. The only result to be regretted in this case would be, if the alarming symptoms manifested by this patient should prevent the prosecution of the inquiry by so candid an observer as Mr. Earle.

HOSPITAL REPORTS,

(*Principally condensed from various Periodical Publications.*)

MIDDLESEX HOSPITAL.

Case of Traumatic Tetanus, successfully treated.

WE have recently witnessed, with considerable interest, the recovery of a patient from traumatic tetanus, in which the principal remedy employed was calomel. The amendment took place on the mouth becoming affected. The following are the particulars of the case.

John Kelly, ætat. fourteen, was admitted into the Middlesex Hospital, under the care of Mr. MAYO, on the 1st of July, having fallen from a scaffolding; by which accident the radius of the right arm was broken near the wrist, and the integuments of the right knee were lacerated and torn back. Nothing unfavorable occurred, till more than a fortnight had elapsed; at which time the wound of the integuments was almost healed; but, on the 17th, towards evening, the lad complained of stiffness of the jaws and of the back of the neck, of which he now said he had felt

something the preceding day. The house surgeon directed the application of a blister to the back of the neck, and a purgative enema.

On the 18th, at twelve o'clock, Mr. Mayo saw the patient. At that time the jaw did not admit of being depressed above one third of an inch; the back of the neck, the back, and abdomen were rigid; and the permanent spasm was occasionally heightened by a brief and more violent action of the muscles; the countenance was anxious and alarmed, and bathed in perspiration; the tongue furred, but moist; pulse 150; bowels confined. Sixteen leeches were applied to the back of the neck, and six grains of calomel administered; and shortly afterwards two drops of oil of croton.

Four o'clock.—The bowels have acted twice and copiously. It was now Mr. Mayo's intention to try the carbonate of iron: accordingly, a drachm of this medicine was given to the lad; but, as he swallowed with great difficulty, even this quantity of the remedy was some time in being got down; and, although half a drachm of laudanum was given with it, the dose was speedily returned by vomiting. Under these circumstances, the medicine was directed to be changed. At seven o'clock the patient took ten grains of calomel, and the same dose at eleven o'clock, with a drachm of laudanum. At this time the tongue had become dry, but the pulse had fallen in frequency, and the lad appeared to swallow more easily. Poultices, containing Goulard's lotion and laudanum, were applied to the unclosed, but not unhealthy, wound on the knee, and to the blistered surface at the back of the neck.

19th.—The lad slept occasionally during the night. There was no essential alteration in his appearance. At noon he took five grains of calomel, and two of tartarized antimony, which were repeated every two hours; but in the evening he became sick, and vomited, and the calomel alone was continued.

20th.—His appearance this morning was changed for the worse: the jaws were closer, and the muscles more rigid. He was taken into the bath-room, and three pails of cold water were thrown over him. His pulse sunk temporarily to ninety, and was irregular. He experienced some slight but temporary relief: he was, he said, "fresher and better," and had no objection to the repetition of the cold affusion. At three it was repeated, but without benefit. At night he took a grain of opium and a grain of acetate of lead; which dose was repeated once the following morning.

21st.—He has again had some sleep during the night; but the general spasm of the muscles of the jaws, neck, and trunk remains. The extensor muscles have the advantage, and keep his body in a position approaching to opisthotonos.—*R. Hydr. Submur. gr. iij.; Antim. Tart. gr. i.; Pulv. Opii gr. ss. every three hours.*

22d.—He is distinctly better; the mouth admits of being opened wider. At the same time he is largely purged, and the breath has the mercurial fœtor; the gums are tender, the cheeks sore.

From this time the lad recovered rapidly; the mercury being discontinued, and his strength gradually restored by nourishment cautiously given.

There were two circumstances worthy of observation during his recovery: the spasm of the muscles did not disappear at once, but was each day sensibly less than on the preceding. On the 3d of August, it was the boy's impression that he had completely got rid of the stiffness about his neck and jaws. The other circumstance was the following: One evening, about the 27th, while there was great rigidity of the body yet remaining, Mr. Mayo, on visiting his patient, found him asleep, and remarked that he lay perfectly relaxed; the abdominal muscles were soft and yielding, and had not the least tension. The boy was awakened, and at the instant the full tension of the muscles returned. Not being further disturbed, he fell asleep in a few minutes, when the muscles again became relaxed; and again, on his being awakened, resumed the state of spasm.

Laceration of the Perinæum and Sphincter Ani. Involuntary Discharge of Fæces. Operation performed with success.

CHARLOTTE KENDALL, æt. twenty-five, was admitted into the Middlesex Hospital, under the care of Mr. Mayo, about the middle of May. She had been confined, for the first time, on the 19th of the preceding October. The labour was not severe; but two days afterwards she observed that the fæces passed away involuntarily. This distressing circumstance continued; and, at her admission, she mentioned that the period of twenty-four hours, at which it habitually occurred, was very regular: from five in the morning till eleven in the forenoon, the bowel used at intervals to discharge its contents, and not during the rest of the day or the night.

On examining the parts, the perinæum appeared to have been extensively lacerated, and the sphincter entirely torn through into the vagina.

The operation of paring the edges of the laceration, and sewing them together with four stitches, was then performed. On the third day some opening medicine was administered, when the ligatures gave way, and the fissure became as before.

On the 17th of June, Mr. Mayo repeated the operation. For the nine subsequent days the patient was kept perfectly quiet, with very little nourishment, and without medicine. For this period there was no uneasiness, and no action of the bowels. Motions were then obtained by means of castor oil and an enema; when it seemed at first to the patient that nothing had been gained by the operation. In a day or two, however, she found that she certainly had acquired *some* control over the action of the bowels. Then an

attack of diarrhoea ensued, and every thing again came away uncontrollably; but, on her recovery from this attack, it became evident that a real and important improvement in the state of the parts had taken place. It now appeared to her that the sphincter had been restored; and, on examining the parts, it was found that almost the whole of the fissure had united. After the experience of four or five weeks, she ascertained that, as long as the motions were not relaxed, she had perfect and entire control over the bowel: when the motions are loose, on the contrary, they still come away involuntarily.

Upon weighing these circumstances, Mr. Mayo, in our opinion very judiciously, recommended his patient to be contented with the advantage that had been gained, and not to risk its loss by a repetition of the operation.

BALTIMORE ALMSHOUSE INFIRMARY.

Dr. Wright's Reports of Cases of Erysipelas.

THE following cases are reported for the purpose of pointing out the very manifest controlling or modifying influence displayed by erysipelas over other forms of disease existing in the system at the time of its invasion.

CASE I.—Hannah Kennard, forty-five years of age, full habit, and firm constitution, was admitted into the Baltimore Almshouse, June 7th, 1827, for treatment of a large inveterate ulcer of the leg, of four years' standing. Her general health was unbroken. On the third day after admission, this woman complained in the evening of being sick, feeling alternately chilly and feverous, with headach and nausea.—Ordered an emetic, to be followed by a full dose of calomel.

The following morning, the second of the disease, there was soreness, with swelling, heat, and inflammatory blush, over the integument of the forehead, face, and part of the scalp; the swelling greatest on the forehead. The pulse was frequent and full; febrile heat generally diffused over the body, tongue white, head painful. The woman attributed her indisposition (incorrectly, I think,) to having been washed in cold water when first admitted into the house. This was the first instance of erysipelas of the face and scalp occurring in the house, after the medical department of the institution had been placed in my charge. She was ordered small doses of calomel, nitre, and antimonial powder, at intervals of four hours, with an intervening dose of weak solution of tartar emetic, charged with spirit of nitre; drink, barley-water acidulated; diet, milk diluted, and toasted bread; free admission of air. The local affection was treated with solution of muriate of ammonia in distilled vinegar and water; the solution charged with a small quantity of the tincture of camphor, and applied cool, by means of linen cloths.

On the third morning, the face and scalp were swelled to great deformity; the palpebræ loaded and closed, the cheeks almost level with the spine of the nose, lips very thick and hard; the whole surface, forehead, and face, smooth and glistening from tension. The pulse more frequent than on the day before, still full, but less firm; the general heat increased; tongue brown, with white edges, and moist; head painful; mind somewhat unsteady.—The medicine was continued, with addition of camphor to the powders of calomel and nitre; and, on account of slow bowels, sulphate of magnesia was added to the draught. The local application was also continued, but, under an impression that it would be more soothing, and better relieve heat and tension, it was directed to be used pleasantly warm.

Afternoon.—Large and very much elevated vesications over the face; and which were directed to be carefully punctured, the effused fluid gently washed off with tepid water, and the warm ammonia lotion reapplied. On account of vigilance and restlessness, a full anodyne of Dover's powder was ordered for the night, after operation on the bowels.

Fourth morning.—The patient was a good deal prostrate, pulse contracted and quick, surface rather cool, tongue dry and brownish red, bowels lax; the face and scalp less swoln, surface of vesications dry and red. The patient was quieter than before, and rather disposed to somnolency, approaching stupor.—The treatment was now changed. Quinine was ordered, one grain in two hours, dissolved in acidulated aromatic water; with tincture of bark, spirit. mindereri every four hours, with ten drops of laudanum, to restrain the bowels. Local application continued as an occasional wash for the erysipelatous surface, which was after dusted with common starch. Diet rendered somewhat cordial, by a small addition of wine to the bread-tea, which had been previously used in a simple state.

Fifth day.—The energies of the system had rallied sensibly: irritation of the bowels allayed, pulse less frequent and more steady; the surface naturally warm, and the patient acknowledged improvement of feelings. The amendment continued.

On the sixth day, fever was absent; the patient sat up in bed, and took nourishment with sufficient appetite. Her complete recovery was established in a few days; the whole erysipelatous surface desquamated.

The ulcer of the leg, five or six inches every way in surface, which had remained in a foul, unhealthy condition for four years, in a few days after the fever of erysipelas subsided, filled up rapidly with granulations of good size and colour, and, under simple treatment, with rest, closed in with a firm smooth surface, in little more than a fortnight after recovery from her late illness.

CASE II.—William Pine, aged about thirty, had been for many months in one of the cells of the Baltimore Almshouse, in a state

of insanity. From what could be learned of his history prior to admission, he had been for some years in an unsettled state of mind, and had occasionally undergone medical treatment and moral restraint on that account. His understanding, at the time of his admission, seemed wholly obliterated, and he continued without after-evidence or interval of reason during the time stated, namely, for many months. His manner was generally silent and sullen, and, when he could be excited to any degree of effort, he spoke with rapid incoherence, his conversation running into a chaos of folly. The man's bodily health seemed little affected by his state of mind: he became somewhat emaciated from confinement, but his pulse was always calm and equal, and the temperature of body natural. He took food regularly, though without that voracity of appetite frequently attending insanity; and the excretions necessary to health were sufficiently performed. In respect to the latter, however, the patient had reverted to the state of childhood: the evacuations were passed without regard to time or circumstance.

The preceding statement is given to show the man's common state while in the house. On the 9th of June, Pine was attacked by chill, with high fever, flushed countenance, inflamed eyes, foul tongue, and the general evidences of great disorder. He was immediately removed from the cell to the infirmary, for the benefit of a purer and fresher atmosphere. On the day succeeding the chill, a deep florid hue overspread the face and scalp; swelling went on rapidly, attended by the smooth, glistening appearance characteristic of erysipelas, with effusion into the cellular structure of the eyelids, lips, &c. as described in the former case. The feverish tumult was much more marked than in the preceding instance, with severe headach, great heat of body, &c.

Already, in the first stage of this acute attack, Pine's intellect seemed to be rousing from its long torpor and habitual error. When questions were addressed to him now, there was an apparent act of deliberation before answering, and his replies, with occasional vacillation, were coherent and satisfactory. This relative saneness became more distinct and established as the disease advanced; and, on the third, fourth, and following days of its course, Pine's manner, replies, &c. were orderly and rational, no longer betraying any tendency to alienation. The local inflammation and constitutional disorder were very severe in this case for some days. The former resulted in early and extensive vesication, terminating ultimately in general desquamation of the cuticle of the face. The fever remitted on the fourth day, and subsided altogether about the sixth, (its nearly uniform period of cessation in almost all the cases,) leaving the patient much debilitated.

The treatment was conducted by moderate purging with calomel, followed by Epsom salts, with minute addition of tartrate of antimony. The subcarbonate of potash, with wine of antimony or ipecacuanha, was afterwards given generally through the course

of fever, in doses and at intervals regulated by its effect on the stomach, pulse, and skin. The patient's drink, diet, and general regimen was the same as in the case before reported; and the local application used in the other case was employed in this also.

The intelligence which had been revived in Pine's case with the development of erysipelas, continued during his convalescence, and he left the institution without having betrayed indications of lapsing into his former obliquity of mind. This man abused the privilege granted to convalescents of walking in the yard for air and exercise, and eloped from the Almshouse ten days after recovery from erysipelas. His state since then is not known to me.—*American Journal of Med. Sciences.*

Case of Hydrothorax, partial Ascites, and great Infiltration of the lower Extremities. By THOMAS H. WRIGHT, M.D.

THE following case supplies a satisfactory explanation of one of the causes of sudden death, ensuing to hydrothorax, after the signs proper to that form of dropsy were no longer perceptible, and when the case seemed to have put on the character of decided convalescence.

Charles O'Neal, labourer, aged forty-seven, was admitted into the Baltimore Almshouse Infirmary, June 20th, 1827. The symptoms of thoracic and general dropsy commenced four months antecedent to admission, and were consequent on cold, fatigue, and long exposure to wet, in the laborious occupation of ditching, in which he had been employed the greater part of the preceding winter. The difficulty of breathing was now great, with inability to lie down; cough inconsiderable, slight fever, no acute pain, bowels torpid, and urine scanty.

This patient was put on the use of a bitter cathartic infusion, (gentian, senna, supertartrate of potash, and aromatics,) which kept the bowels freely soluble, and increased the secretion of urine, but without sensible alleviation of the symptoms of hydrothorax. The breathing continued anxious, difficult, and crepitating; and the inability to lie down for more than a few seconds remained as at first. The infusion was continued, with the addition of a diuretic compound, (tinct. digitalis, ol. terebinth., and spt. nit.) exhibited along with the cathartic draught. The purgative and diuretic effects of the combination were very considerable, and both the ascites and anasarca were very greatly reduced. No favorable impression, however, was made on the hydro-thoracic affection, and the agents hitherto employed were laid aside. The after-treatment consisted of a liberal use of solution of cream of tartar, sweetened with molasses, in a draught of which was occasionally exhibited the following diuretic compound: Fecula of Elaterium two grains, Tinct. Scill. and Oxymel Colchici, each half an ounce, in four ounces of solution of Acetate of Potash; dose, two to three drachms, pro re nata. The salutary operation of

those agents soon became manifest, and was very explicit. In five or six days after adopting the latter course, the respiration became easy, measured, deep, and inaudible, having lost all crepitation. The breast was also now more distinctly resonant to percussion, and recumbency was practicable without inconvenience.

It was about the 1st of August, six weeks after admission, that the propitious circumstances just recorded occurred, and gave such indications of amendment as seemed to remove all cause of apprehension for the present. On entering the infirmary, 6th of August, it gave me great pleasure to notice this patient, dressed and sitting on his bed, with a countenance strongly expressive of the ease and comfort of his present feelings, contrasted with his distress for many weeks preceding. His remarks were full of confidence in his agreeable sensations, and exultation at the prospect of prompt and perfect recovery. Two hours after leaving the infirmary, I was called to return there in haste, on information that O'Neal had been seized with a fit. In a few minutes from his attack I was at his bedside, and he was without a sign of life.

I was at a loss to account for the catastrophe in this case, and my conjectures hesitated between the presumption of lesion in the brain, or sudden extinction of the heart's action, from concentrated dropsy of the pericardium.

Dissection, a few hours after death.—The head was first examined. The dura mater presented nothing uncommon, except a degree of humidity greater than occurs in the natural state; the proper tunics of the brain were also overspread by a very sensible quantity of thin serous fluid, constituting a remarkable dampness of the surface rather than any positive collection of fluid, though the amount much exceeded the natural halitus with which the parts are bedewed. There was some degree of engorgement of the superficial sinuses of the brain, but no mark of inflammation of the tunics. Cutting away the medullary substance cautiously down to the lateral ventricles, they were found very much enlarged, as if recently greatly distended, but were at this time quite empty. On prosecuting the dissection below the level of the tentorium, the fourth ventricle, the head of the medulla spinalis, and whole base of the brain, were inundated by water, which, when the head was depressed, flowed out to the amount of five or six ounces.

On referring now to the enlarged and empty state of the lateral ventricles, it seemed apparent that the fluid found upon the base of the brain had been first accumulated in the lateral ventricles; had remained there for an uncertain time without serious consequences; and at last, by forcing the valvular defence, and the pulpy closure of the passage leading to the fourth ventricle, had dropped suddenly upon that cavity, and by rupture of the ventricle (at its thin, inferior surface,) was effused upon the medulla oblongata, and into the spinal canal. Pressure to a great degree thus

suddenly made on the origin of the most important nerves of organic life, seems fully adequate to explain the total extinction of sensorial function, with the nearly instant death that ensued in the case of this patient. In the thorax, the sacs of the pleuræ and the pericardium, there was very little effusion; nor was there any obvious morbid state of the heart itself, or about the origin of the great vessels.

The circumstances attending this case, its mode of termination, and the facts disclosed by examination tending to render that mode of termination intelligible, all seem to point to a certain inference in the present, and in relation to similar cases. They lead to the conclusion that, in dropsical disease, while effusion is going on in the serous and cellular textures of the great cavities and general body, a similar result may obtain in the delicate ventricular tissues of the brain, and especially of the greater or lateral ventricles.* It seems probable, also, that this partial hydrocephalic state may remain inoperative for a time, perhaps in some instances a long time, until, from quantity and gravitation, or some shock causing its irruption, it may suddenly inundate the base of the brain, and produce instant death, by invading the seat and suppressing the function of the most important nerves. The event in contemplation may occur at some stage of progressive dropsy, or may ensue at various intervals subsequent to apparent removal of the general hydropic state; for it is probable, from many facts and analogies, that hydrocephalic accumulations are seldom removed or diminished by absorption.†—*Ibid.*

Anasarca and Ascites. Fatal and Sudden Termination.

By Dr. WRIGHT.

WILLIAM TARRING, aged twenty-six, was admitted into the Baltimore Almshouse, September 17th, 1827. This was an aggravated case of general dropsy, uncomplicated, however, by hydrothorax. Abdomen extremely prominent and tense; upper and lower extremities greatly œdematous; countenance eminently leucophlegmatic; great debility; breathing short, but clear,

* It is the suggestion of some eminent anatomists (the Bell's,) that the plexus choroides is almost entirely a web of vessels destined to the secretion of a fine serum or halitus. If this opinion be well founded, it may explain why great serous accumulation is more generally found occupying the lateral ventricles than the other cavities of the brain, as only a very faint appearance of choroid plexus can be discovered in the other ventricles.

† A surmise of absorption has been founded on some examinations of the head, in which previous hydrocephalic collection was inferred from certain indications in the state of the membranes and ventricles, though there was no longer sensible effusion. Yet the long period, sometimes years, for which the water of hydrocephalus is known to have remained unabsorbed, taken in connexion with the fact that cases attended by unequivocal signs of matured hydrocephalus are very generally fatal sooner or later, places the presumption of absorption to an extent sufficient to relieve dropsy of the brain, on ground of doubtful authority and difficult admission.

without mark of bronchial effusion; no cough, and absence of fever. The dropsical affection had existed some weeks prior to admission, and was consequent on severe remittent fever, contracted in August, while working on the Harrisburg canal.

The excessive tension of the abdomen in this case prevented any satisfactory examination, by taxis, of the great viscera of the belly, the liver, spleen, &c.; but, from the patient's report of having been in good health previous to the attack of remittent fever, on which the dropsy was consequent, and from the absence of any representation of serious hepatic derangement in the complexion, the tongue, excretions, &c. of the patient, the case was presumed to be free of any actual organic impairment. Some degree of primary visceral congestion, high and continued tumult and effort of vascular action, with more or less irritation and disorder of the gastro-hepatic functions, and proportionate exhaustion ensuing to those joint causes of disturbance, seemed to have led on rapidly to hydropic effusion, with the disabled and oppressed state of the system which the case presented on admission.

The usual remedies of dropsy (omitting in great part mercurial combination,) were employed in the case as freely as circumstances would permit. An infusion of gentian, senna, supertartrate of potash, and aromatics, was given liberally, with powders of squill, nitre, and digitalis; Dover's anodyne being added to the powder exhibited at night. The patient was also directed the free use of barley-water, acidulated with cream of tartar, and rendered moderately cordial by gin. Under this treatment both the bowels and kidneys performed their appropriate functions with as much activity as was desirable; the tension of the belly was gradually taken off, and the overloaded cellular tissue became relieved. The evacuation of the dropsical effusion went on slowly but constantly, and, by the careful regulation of the medicines, with due alimentary support, the patient was free of oppression, and somewhat recruited in strength, by the end of the fifth week after admission. This man became able to leave his bed, and walk the infirmary hall every day for some hours, eating with appetite his whole allowance of food.

During this promising state of convalescence, Tarring was attacked, in a season of wet weather, late in October, by quotidian intermittent fever, for which bark and aromatics were given freely, and the paroxysms were interrupted after the third period. But the patient was a good deal worsted by the attack, was confined to bed by debility, and, in a few days subsequent to arrest of the intermittent paroxysms, dropsical effusion began to display itself in the extremities. In a week after he was as much affected by ascites and anasarca as when first admitted.

The remedies successful in the first instance were tried again, more sparingly, however, in quantity; but their good effect was not so considerable as formerly, the action of the absorbents, of the kidneys, and of the bowels, being much less efficient; and, after a

longer perseverance in the medicines than had been necessary to effect improvement in the first instance, the amount of effusion remained undiminished, while the energies of the constitution had gradually declined.

The medicinal agents were then changed: good Lima bark, with an aromatic, was ordered, and the patient directed a liberal use of the cream of tartar punch, with the addition, three or four times in twenty-four hours, of two drachms of a diuretic combination before noticed: namely, fecula of elaterium four grains, in four ounces of solution of acetate of potash, adding tinct. of squill and oxymel of colchicum.

This plan of treatment, with light cordial nourishment as freely as could be taken, gave a better aspect to the case. The urine augmented very much, the alvine evacuations became copious and watery, the tension every where relaxed gradually, and the forces of the circulation rallied to the natural tone as the oppression was taken off.

Early in December the signs of dropsy were a second time dissipated, and the youth of the patient, in connexion with a naturally good constitution, encouraged the expectation of permanent convalescence.

Nothing occurred to defeat the presumption of perfect recovery in this case until the 20th of December. The man had been about all day, and on that evening had eaten a hearty supper, and seemed as well and comfortable as for some time before. An hour after supper the nurse of the ward was called to Tarring, by a patient in an adjacent bed, who observed him fall suddenly into a state of unusual agitation and disorder. She found him with limbs rigid; oppressed, stertorous respiration; and in a state of insensibility from which he could not be roused. He expired in a few minutes.

From circumstances which rendered autopsic examination inconvenient at the time, the direct cause of sudden death in this case was not ascertained. But, from the marked analogy in the manner of Tarring's death, with previous fatal instances under like general circumstances, where serous extravasation was found to have occurred in the basis cerebri and medulla oblongata, the issue of his case was referred to a similar cause. The period of life in this case was much against the probability of organic degenerescence of structure about the organ of circulation; and the presumption of serous, cardiac, or pulmonic infiltrations, was equally opposed by the non-existence of even the slightest hydro-thoracic symptoms at any period of the dropsical affection.—*Ibid.*

Case of extensive Ulceration of the Leg, healing rapidly in an unexpected manner. Death. Effusion into the Ventricles of the Brain. By Dr. WRIGHT.

THOMAS COURSEY, a black man, aged seventy-four, of very large frame of body, and apparently great original vigor of constitution, was admitted into the Baltimore Almshouse, in September 1827. This man was in good general health when admitted, yet was disabled from work partly by age, but more from disease of the left inferior extremity. The motion of the left knee-joint was entirely lost, in consequence of severe contusion of the part received thirty years before. From the man's account, arthritis to a great degree had ensued to the injury in the first instance, followed by profuse suppuration, great distention, and ultimate relaxation of the synovial membrane, articular and capsular ligaments, and finally spontaneous subluxation, outward and backward, of the head of the tibia; which, becoming permanent, caused a very curious and rare species of deformity.

Besides the distortion and ankylosis of the knee-joint, the leg was overspread by a large and deep ulcer of the chronic indolent class, which had commenced simultaneously with, or very soon after, the injury of the knee, thirty years past, and had never healed. The surface of ulceration was altogether, at the patient's admission into the infirmary, about ten inches in extent, suppurating profusely; and, from its seat, appearance, and duration, had probably long since involved a diseased state of the periosteum and bone.

The man's general health being good, nothing further was directed in his case than rest, and such local treatment as was indicated by the state of the ulcer, namely, cleanliness, and dressings fitted to maintain, as far as possible, a healthy state of the suppurating surface. From the man's age, the character and duration of the ulcer, its complete closure or cicatrization was not contemplated or deemed probable.

This man remained well for three months succeeding his admission, evincing no disposition to any form of serious or constitutional disease; his spirits, appetite, and personal appearance were all perfectly well maintained. The ulcer of the leg during this time had undergone, as was expected, scarcely any sensible change, other than the clean appearance and absence of irritation which frequent and regular dressing, with continued rest, would almost necessarily produce: its dimensions were but little diminished. Late in December, however, a sudden and remarkable alteration was displayed in its character. It commenced a course of rapid healing, and, in ten days from the time the change was first noticed, the whole original space of the ulcer was covered in,* and

* A man named Lafito, who had been long a dresser in the house, and formerly (as he represents) in the same capacity in the Philadelphia Almshouse, remarked, while exhibiting the great change in the state of Coursey's leg,

cicatrized very smoothly, leaving only a central point a few lines broad, which furnished a partial suppuration.

No obvious difference in the patient's general health attended this sudden healing of the ulcer, but a very prominent change was manifested in the man's temper and moral habits. He became peevish, quarrelsome, and indocile in his conduct, averse to keep in his place or put up with his accommodations in the ward, and very impatient of admonition or control. His language and manners betrayed nothing of derangement of intellect, properly so called: yet his fretful, unquiet state, and improper manner of speaking, rendered it at last necessary to remove him from the ward to one of the cells, where he was kept alone, but without any personal constraint. This was done in the second week after the healing of the ulcer, and, on the day following his removal to the cell, Coursey was visited by the superintendent of the institution, who found him apparently well as usual, but, as before, very much disposed to rude and passionate complaints, which he indulged to a great degree on the present occasion. In a few minutes after the visit of the superintendent, the keeper of the cells came to report that Coursey had fallen down in a fit, and died instantly.

Examination, four hours after death.—The dura mater exhibited nothing uncommon, except an unusual blanched appearance, and was without marks of inflammation or of vascular engorgement. The proper tunics of the brain presented a natural condition, or were in no other manner altered in character than by excess of humidity, and the same blanched or soddened appearance observed about the dura mater.* This humid and bloodless appearance was obvious in the successive portions of the medullary matter, removed in penetrating by sections down to the lateral ventricles. When those cavities were arrived at, and carefully opened, they presented the most extraordinary degree of enlargement I have ever witnessed. The ventricles were penetrated at the posterior horn, and were found empty; but, on enlarging the incision, and lifting the thin covering which had been left them in removing the cerebral mass above, the ventricles presented rather the appearance of caverns than cavities in the brain, seeming capable of receiving a body of considerable size, (as a small orange or lemon,) and of space sufficient to contain several ounces of fluid. On being fully exposed, the delicate tunic reflected around the ventricles was of highly florid colour throughout, from minute vascular engorge-

“that the man had not long to live:” an idea of danger from the sudden healing of old ulcers not always realized, yet far from being altogether a vulgar notion or groundless prejudice.

* The convolutions of the cerebrum were much deeper, and more readily and widely separable from each other on this subject than I had ever noticed them in any other instance. In all those fissures, and to a great depth between the convolutions, might be seen bundles of vessels running in straight lines, or stretched across the interspaces, and all those vascular fasciculi, (the deep arteries and veins of the pia mater,) of high colour, and very much engorged.

ment, while the plexus choroides was a good deal wasted, and altogether colourless, not easily distinguishable, and much resembling a gelatinous mass. The valvula cerebri (of Vieussens) could not, from distention of parts, be recognised; the aqueduct of Sylvius was very much dilated, and, from its commencement down into the fourth ventricle, was filled with water; as was also the fourth ventricle, the whole space around the base of the brain and head of the spinal marrow; the same fluid gravitating freely into the vertebral canal. The quantity of water poured out of the inferior cavities and space of the brain, and of the upper vertebral cavity, exceeded six ounces; its colour was slightly red, and it was somewhat viscous or albuminous to the feel when rubbed between the fingers.*

In this case, circumstances warrant the presumption that the great quantity of water found occupying all the lower cavities and space of the head was originally produced in, and for some time confined to, the lateral ventricles; from whence it descended, probably suddenly, into the fourth ventricle, (which was ruptured inferiorly,) and thus became effused and free as it was found on dissection. The cavern-like enlargement of the lateral ventricles indicated great distention by previous accumulation of fluid.

The phenomena arising towards the close, and concurring in the termination of this case, viewed in connexion with the direct cause of that termination revealed by dissection, bear a seeming intimate relation to two points of physiology. They tend to illustrate the liability and mode of sudden death from large collections of water in the upper cavities of the brain, and serve in the present case forcibly to call to mind the ancient and much-controverted doctrine of the metastatic attribute of disease. A doctrine fruitful of medico-scholastic dispute, which, after various fortune and a period of protracted dormancy, has been revived under the light of better science, and become a good deal the favorite of modern pathology.† Can we allow ourselves the inference in the case before us, that the sudden healing of an extensive

* The commissura mollis, so seldom to be found that its existence has been questioned by some eminent anatomists, was very distinct in this case. It was of pale, yellowish gray colour, semi-translucent, about the size of a writing quill, standing as a bridle across the thalam. nerv. opt. under the fornix. Mr. Bell is probably right in saying that the commissura mollis is best seen in hydrocephalic brains. I have not discovered it plainly in any other.

† In substituting the metastasis of morbid actions for the original notion of a translation of morbid matter, or the migration of disease in its limited and literal sense, modern pathology has taken a ground so well sustained by observation and facts, as to be perhaps impregnable. That on the sudden suspension of morbid actions in one seat, irritation and its consequences may be simultaneously developed in some other part, the latter holding a relation of dependence or substitution to the former, seems entitled to rank as an axiom of medicine.

ulcer of thirty years' standing, was concerned in the change represented to have taken place at that time in the patient's conduct and manners, and that the moral effect in question resulted from physical irritation devolved on the encephalon? Can we further presume, on legitimate metastatic principles, that the sudden suppression of habitual suppurative action over an extensive surface on the leg, might give occasion to that excitement to serous exhalation into the cavities of the brain, the product of which was so prominently obvious in this patient's case.

Regarding it as a curious fact, that a rapid and apparently sound closure of an extensive ulcer of thirty years' continuance should have occurred, where I felt assured that the subjacent bone had suffered degeneration, probably in a great degree, I caused a portion of tibia to be cut out, and subjected to maceration for a sufficient time to free the bone of all soft matter. When this was effected, and the bone dried, the seat and extent of the ulcer were found very clearly and strongly defined on the tibia. There existed a very peculiar change, which the surface of bone, corresponding to the ulcer, had undergone, which was not caries or necrosis in any of their forms: the bone was firm and solid over its whole extent, but a singular state of granular and scabrous roughness occupied the space of bone answering to the seat of the ulcer. There existed, in fact, for some inches on the face of the tibia, a dense crop of exostoses of various form and dimensions, some of the miliary character, and small size; others, orbicular or pisiform, of considerable magnitude, and many scaly or laminated, with broad surface, raised on a sort of footstalk, and were thus button shaped, or much resembling small fungi of the mushroom species. All those productions were white and solid, (not easily broken off,) and were apparently complete specimens of ossification. The possibility of the formation by gradual interstitial waste of bony substance was taken into consideration; but there were no evidences of such interstitial waste having occurred, there were no marks of softening or caries upon or around the surface affected; and the circumference of the bone, taken between the eminences of the affected surface, was equal to the shaft of the bone above or below the limits of disease.—*Ibid.*

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
illa, prius, cretâ; mox hæc, carbone, notamus.—PERSIUS.

A Practical Synopsis of Cutaneous Diseases, according to the Arrangement of Dr. WILLAN; exhibiting a concise View of the Diagnostic Symptoms and the Method of Treatment. By THOMAS BATEMAN, M.D. F.L.S., Physician to the Public Dispensary, and Consulting Physician to the Fever Institution. *The Seventh Edition.* Edited by ANTHONY TODD THOMSON, M.D. F.L.S., Member of the Royal College of Physicians, and Professor of Materia Medica and Pharmacy in the University of London, &c. &c.—8vo. pp. 460. Longman, London, 1829.

DR. BATEMAN'S work on Cutaneous Diseases is too generally known to require at the present time any abstract of its contents, or any opinion of its merit. Its character as an excellent practical book is firmly established in the estimation of the profession. We shall, therefore, confine ourselves principally to the improvements and additions which have been made by Dr. THOMSON, as editor.

The arrangement of the diseases described remains the same as that which was adopted by Dr. Bateman, "from a desire that the work should still retain the stamp and impression given to it by its excellent author." To render the work as useful as possible to the student, has been the chief object of the editor. With this view he has added the synonyms of each genus and species; and, by giving the definitions in a distinct form, he has impressed on the whole a more definite character. He has been enabled also to add considerably to the practical part of the work, from the opportunities afforded to him by his connexion with two extensive medical charitable institutions. Much to the advantage of the student, also, Dr. Thomson has added, at the close of each genus, a list of the works which may be consulted on the diseases that constitute the genera.

No verbal description of cutaneous diseases, however lucid and accurate it may be, can convey to the mind a sufficient idea of their appearance. In this branch of medical study, plates are absolutely necessary, and the delineations of the author of the Synopsis are admirably calculated to fulfil this object, but their expense places them beyond the reach of most students. To remedy this objection, an atlas of plates is published with the present

edition. It contains almost all that really relates to the diseases delineated in Dr. Bateman's plates, with the addition of many original representations. To give them the character of demonstrations, the different stages of the eruptions, and other peculiarities necessary to be pointed out, are marked upon the plates: their convenience and utility as references are thus greatly enhanced.

Dr. Thomson gives a brief sketch of the life and character of Dr. Bateman, the materials of which were furnished by the "Life" written by his sister. His professional character is thus favorably portrayed:

"Upon the whole, it may be truly said of the author of the Synopsis, that few men have achieved so much in so short a course of years; that he sacrificed his life to the love of his profession; and that he has deservedly merited a place among the honoured few whose exertions have contributed to dispel the clouds which so long obscured the light of science from the paths of practical medicine."

It is evident that each chapter of the former edition of the "Synopsis" has been very carefully revised, and most of the subjects that are discussed have been more or less improved by the experience of the editor, and by frequent references to additional authorities.

We select a few of the practical suggestions for which we are indebted to Dr. Thomson.

Upon the subject of *Lichen agrius*, he observes that "sulphureous baths, which are undoubtedly useful in several cutaneous affections, invariably increase this form of lichen, unless the disease has become chronic, and is disposed to pass into impetigo. I am aware that this is contrary to the opinion of Mr. Plumbe; who remarks that, after the 'bowels have been for some time kept open,' and the habit reduced, 'the itching and tingling during the operation of the sulphur bath, is rather severe; but it is followed by a much more tranquil state of the circulation in the cutaneous vessels, and the cure is altogether expedited by it.'"^{*}

Dr. Bateman observes, that the causes of *Psoriasis* are nearly as obscure as those of *Lepra*. In almost all the cases which Dr. Thomson has seen, except those of a purely local nature, the digestive organs have been in fault, and great acidity of stomach has prevailed. He thinks it not improbable that the arthritic diathesis, mental anxiety, the unseasonable employment of the cold bath; a copious use

* Practical Treatise on Diseases of the Skin, p. 196.

of acid fruits, vinegar, or crude vegetables; or some peculiar mixtures of food, always produce this state of stomach previous to the appearance of psoriasis; "and it is probable that the irritable state of the stomach, which gives rise to the imperfectly formed gastric juice in these cases, is accompanied by a corresponding irritable condition of the skin, which inducing subacute inflammation of the superficial capillaries, causes the cuticle to be secreted in the diseased state which characterises this eruption."

In *Psoriasis inveterata*, Dr. Thomson informs us, the use of the arsenical solution has in many instances been found highly beneficial, when the dose has been gradually carried to an extent which would be dangerous in other states of the habit.

"Thus, in a case successfully treated by Mr. Gaskoyne, the dose was gradually increased to thirty-eight drops twice a day; and it was not until the desired change occurred in the eruption, that the colicky pains and other symptoms of an overdose of arsenic presented themselves. Candour obliges me to acknowledge that, notwithstanding the powerful influence of arsenic in *Psoriasis inveterata*, I have met with cases which resisted it, even when administered in the largest doses. In some instances, erysipelas has accompanied the use of the arsenical solution; in which case the administration of the remedy should be suspended until the erysipelas be removed, and afterwards renewed in smaller doses."

"From my own experience, I can confidently assert that the medicine on which the greatest confidence may be placed, in *Psoriasis diffusa* and in the milder cases of *P. inveterata*, is the liquor potassæ. I usually commence with thirty drops of the solution in two fluid ounces of the bitter-almond emulsion, twice a day; and gradually increase the dose of the solution to eighty, or even one hundred drops. If the patient be delicate, the infusion of yellow cinchona bark, or of cascarilla, is substituted for the almond emulsion. I have frequently found the hydrargyrum cum cretâ, in doses of six or eight grains, given at bedtime, an useful adjunct to the solution of potash." (P. 67.)

The following interesting case of *Ichthyosis simplex* is also given by the editor:

"The patient was about fifteen years of age in the spring of the year 1810, when the disease was first observed. She had previously been subject to headaches, flatulence, disordered bowels, cold feet, and flushing of the cheeks. The first symptom was little more (to use her own words,) than a soiled appearance of the cheeks, which was easily washed off with warm water and soap; and it was not until the autumn of 1812 that this soiling began to increase and adhere more firmly; and in the course of a

few months it became so considerable, that the parents of the patient consulted the late Dr. James Gregory, of Edinburgh. After the use of some acrid applications, which produced inflammation and ulceration, Dr. Gregory succeeded in clearing the skin in ten days. This improvement, however, was of short duration: the disease returned; when steel and aloetics, mercury carried to salivation, warm sea-water baths, shaving off the incrustation, an ointment composed of carbonate of soda, spirit of turpentine, sugar, and resin ointment; a strong lotion with oxymuriate of mercury, and various other means, were successively employed to clear the skin, for three years, but without success; when she came to London for further advice.

"The eruption at this period extended over both cheeks, and across the bridge of the nose: it was of a dirty olive-brown hue, and greatly disfigured a face which was naturally very beautiful. It had much the appearance and the harshness of shagreen. Under Dr. Bateman's care, the patient took pitch pills, and employed various internal and external remedies, but without any permanent benefit, for six months; when, becoming tired of medicine, she resolved to return to Scotland uncured. The editor, however, having persuaded her to remain in the metropolis, after the empirical trial of many remedies, succeeded in completely removing the eruption, by means of a decoction of the root of the sharp-pointed dock, *Rumex acutus*, taken internally. In eight days the skin acquired its natural texture and appearance; but, the use of the decoction having been discontinued, at the end of ten days more the eruption reappeared; it was again removed by the decoction; and in this manner it was combated at successive intervals for several months, always returning a short time after the decoction was discontinued. Conceiving that the return of the eruption depended on a habit acquired by the skin from the long continuance of the disease, the face was blistered with the cantharides plaster immediately after the eruption was again cleared off, and the cure became permanent." (P. 80.)

Dr. Thomson was induced some years since to apply the hydrocyanic acid, in the form of lotion, in *Impetigo*: he found that it allayed the irritation more effectually than any other means. It has since been very generally employed for this purpose. The following is the formula which he originally used:

R. Acidi Hydrocyanici fʒiv.; Aq. distill. fʒvij.; Alcoholis fʒiv. M. fiat lotio.

Dr. T. has lately found that the efficacy of this application is greatly increased by the addition of sixteen grains of the acetate of lead. This lotion, he says, not only soothes the irritability of the part, but also disposes the skin to take on its healthy action. Mr. Plumbe cautions us against the external employment of hydrocyanic acid, and mentions

that in two cases, of both legs, in which the eruption extended from the ankle to the knee, where it was employed, a considerable intermission of the pulse took place, which ceased on its being discontinued. Dr. Thomson has not seen any bad effects result from the external use of this remedy. We have ourselves frequently employed the prussic acid in the form of lotion, particularly in herpetic eruptions, and have found it succeed better than any other remedy in allaying the tormenting tingling and irritation of the diseased surface; but we have never ventured upon a stronger form than a lotion composed of *one drachm* to six ounces of water; and we confess we should *have been* fearful of using it of nearly *four* times that strength, as Dr. Thomson recommends, especially upon an abraded surface, or over broken pustules or vesicles.*

Dr. Bateman observes, that the functions of the stomach, and of the sensorium commune, are not evidently disturbed by that kind of vesicular disease termed *Eczema*, although the extreme pain arising from the pressure of the weight of the body upon an extensive portion of such a raw surface is sufficient to give rise to an acceleration of the pulse and white tongue. The experience of the editor obliges him to dissent from this opinion.

"In almost every case which has come under his notice, there has been evident constitutional derangement, quick pulse, furred tongue, and impaired appetite, with considerable nervous irritability. Indeed, the latter state has been so frequently present as to induce the editor to regard an irritable state of the nervous system, such as produces hysteria in females, to be the predisposing cause of this disease, when it occurs during a mercurial course. The following case will illustrate this opinion:

"A young woman was seduced from her parents, and brought to London, by one of those unprincipled men who sacrifice every moral and social feeling on the altar of self-gratification. Desire and the pleasure of possession having subsided, the wretched victim of unbridled passion was soon deserted, and fell into a course of life which any deviation from the paths of virtue usually produces in the female sex thus situated. She went upon the town, as the term is, and in that wretched and precarious state of life contracted syphilis, for the cure of which she was placed under a course of mercury. Her father, whose paternal feelings were not destroyed by the stain which the misconduct of his child had affixed on the character of his family, had followed her to town, and in vain had endeavoured to discover her retreat. At length

* We have always used the prussic acid made by Mr. Garden, of Oxford street: it is equivalent to Scheele's in strength, although the mode of preparing it is somewhat different.—EDITORS.

he met her in the street, when she was labouring not only under disease, but when her habit was charged with mercury for its relief, and when she was reduced to a state of extreme indigence. Her eye met that of her parent, and she fled as rapidly as she could from an interview which she dreaded; and, although her father closely followed her, yet she secured her retreat to her lodgings for that night. On the following day she was too ill to move from home; her mouth was affected, and the salivation considerable; when late in the evening of that day she heard her father's voice at the door of the house in which she lodged. She instantly left her bed, and escaped into another room as he entered the one in which she had been lying, and ran into the street in a half-naked condition, during a heavy shower of rain. I was requested to see her on the following day. She was then covered in patches with an eruption, which, to the unassisted eye, much resembled that of scarlet fever. She complained of great heat, stiffness, and tingling upon the inner and upper surface of the thigh, and round the neck and waist. In these parts patches of extremely minute vesicles were apparent, gradually extending themselves over the whole body. The stinging and irritation increased to a degree almost insupportable. There was fever, which in a few days assumed an intermittent character; and a very fetid odour exhaled from the body. The viscid fluid which oozed from the patches dried and crusted, and the cuticle peeled off in large pieces. In this state the disease continued for ten days. The warm bath, anodyne fomentations, liniments of linseed oil and lime-water, were externally applied; whilst saline purgatives, refrigerants, decoction of cinchona bark, the mineral acids and opium, were internally administered, without any beneficial result. In fifteen days from the commencement of the attack, the wretched girl died, in a state of suffering which no language can correctly describe.

"In this case, the mental alarm had predisposed the body, under the influence of the mercury, to be excited by the sudden exposure to cold and damp in a peculiar manner; for that it was not cold and damp alone, is probable from the fact that the poor creature had been driven by strong necessity to walk the streets in all states of the weather, during the whole period in which she had been taking mercurials, without suffering, until the nervous system received the shock which has been described." (P. 363.)

A particular kind of *Nævus* is sometimes met with, which, although originally very small, becomes a large and formidable bloody tumor, readily bursting, and pouring out impetuous and alarming hemorrhages, which, if they do not prove suddenly fatal, materially injure the health by the frequent depletion of the system. A striking case of this kind fell under the notice of the editor about ten years since. As the description of it is very interesting

in a pathological point of view, we subjoin the account of it.

"The little patient was born without any apparent mark upon the body, nor did any appear for eight days after birth, when a small point, resembling a red minute tubercle, appeared on the forehead, and gradually increased to the size of a crownpiece; when it was showed to the editor. This spot was surrounded by many small points, at different distances from the main spot; and these, gradually enlarging, ran into one another, forming larger spots; which again in turn coalesced with others, until they finally were added, as their diameters increased, to the main spot. (Atlas, pl. xxv.) The extent which the whole occupied, and the eye being also involved in the disease, prevented extirpation from being proposed or attempted; and the only curative measure resorted to was an effort to obliterate the nævus, by exciting ulceration in various parts of it. This partially succeeded; but, before the plan had advanced beyond the second sore, the child was attacked with hydrocephalus, and died. A post-mortem examination explained satisfactorily the nature of the disease. The arterial system was natural, but the venous was so thin in the coats of the vessels, that there was not sufficient power to return the blood, which of course accumulated in the veins; and those in the vicinity gradually assumed the same diseased state. The most remarkable part of the case, and on account of which it is mentioned in this place, was the extension of the disease to the bones of the cranium. The editor is not aware of any case of a similar kind being on record. The skullcap is in the museum of anatomy of Dr. Alexander Monro, of Edinburgh, to whom the editor presented it; and an accurate engraving of it will be found in the atlas of plates attached to this edition of the Synopsis." (P. 448.)

We have seen two cases of nævi, each about the size of a shilling, in which there was slight thickening, elevation, and altered structure of the skin, with an enlargement of the veins of the part. By vaccinating these nævi in several points, they were completely cured. A discoloured spot, of course, remained.

Several cases successfully treated in this manner have been lately published in different journals. The narrator of a case* which occurred in the Glasgow Infirmary observes, that it is indispensable to the ultimate success of the practice that the vaccine lymph should be freely introduced over the diseased surface, as well as around its circumference. In this way the adhesive inflammation which is excited appears to extend from one pustule to another, and in the course of a few days the whole becomes involved in one scab."

* London Medical and Physical Journal, July 1829, p. 80.

The extracts we have given will show that the editor has not merely followed his original. He has added to the practical value of the work in almost every page; but his observations are necessarily so incorporated with the text of Dr. Bateman, that it would be impossible to do full justice to them without entering into a more extensive analysis of the work in general than we deem justifiable, as its contents are well known and duly appreciated.

Dr. Thomson deserves the thanks of the profession for this much improved edition of the "*Synopsis of Cutaneous Diseases.*" He has not only added many practical remarks which were overlooked by Dr. Bateman, but he has also introduced many important suggestions which have arisen from subsequent experience.

The plates of the atlas are elegantly and correctly executed, and are moderate in price. By attentively studying them in connexion with the text, which they so well illustrate, the student cannot fail to gain a competent knowledge of cutaneous diseases.

Elements of Medical Statistics; containing the Substance of the Gulstonian Lectures delivered at the Royal College of Physicians: with numerous Additions, illustrative of the comparative Salubrity, Longevity, Mortality, and prevalence of Diseases, in the principal Countries and Cities of the Civilized World. By F. BISSET HAWKINS, M.D. of Exeter College, Oxford; Fellow of the Royal College of Physicians; and Physician to the Westminster General Dispensary.—8vo. pp. 234. Longman, London, 1829.

ALTHOUGH much has been done towards an illustration of the medical statistics of various countries, cities, towns, and hospitals, by numerous inquirers, it is yet to be lamented that so important a branch of science, one from which our practical knowledge would derive such vast improvement, has not produced any single volume to which reference might be made for the purpose of instituting comparisons respecting the influence of climate or local habits, and the peculiarities of disease, in different parts of the world. It is true, as Dr. Hawkins observes, that a great variety of important single facts has been gradually exhibited, by writers engaged on their own particular topics, and by medical and other journals. Of these, many, from their fugitive form or insulated situation, have been neglected or forgotten; and "Reports," which have been matured with severe labour and disinterested patience, have sometimes appeared valueless, because unaccompanied with the mate-

rials of comparison. The author conceives that a favorable moment is, perhaps, at length arrived for arranging these scattered fragments into the rudiments of a system, and for comparing together, in close apposition, the documents afforded by different countries and institutions, which at present lie far asunder. He is perfectly conscious of the difficulties and dangers of the subject; of the dubious authenticity and frequent fluctuation of the necessary details; and of the precarious nature of any general principles attempted to be framed out of facts which have, for the most part, only endured the test of a few years, and which have only recently become the object of inquiry or scrutiny.

An extensive assemblage and classification of such facts possess an historical and local value, whatever may be the fate of the reasonings deduced from them. Independently of the light which this study throws upon medical science, it affords the most valuable illustrations of the history, manners, and customs of mankind, and a just criterion of the progressive or retrograde movements of society.

Dr. HAWKINS is not aware of the existence of any work in the literature of Europe which treats the subject in all its parts, or which takes so extensive a range as the present; a circumstance which, he trusts, will form the best apology for any inaccuracies or omissions inseparable from a *first* attempt to sketch the outlines of a system.

Chapter i. *Utility and history of the subject ; comparison between the value of life in ancient and modern times.*—The word “statistics” appears to have been first used about the middle of the last century, by ACHENWAL, a professor at Göttingen, to express a summary view of the physical, moral, and political condition of states. Many important facts which belong to the domain of statistics had been published long before this appellation had been applied to them.

“But some of the details, thus collected for general purposes, were found to throw light upon health and disease; and, on the other hand, it was often necessary to have recourse to medical authorities, in order to elucidate various points of the general picture. A combination of these scattered features forms *medical statistics*, an elementary specimen of which it is the object of the following pages to present. We may perhaps define it, in a few words, to be the application of numbers to illustrate the natural history of man in health and disease.” (P. 1.)

The *probability* of life, and the *mean* life, are two expressions which often occur in such inquiries. By the *probable*

life is understood the age to which one half of all who are born in a particular country or city attain. The *mean* life implies the result of adding together the number of years attained by a given number of persons, and of dividing the sum total among each of them in equal proportions.

"Statistics has become the key to several sciences, opening in a manner the most convincing, simple, and summary, their gradual progress, their actual condition, their relations to each other, the success which they have attained, or the deficiencies which remain to be supplied. Its application to the objects of government has created political economy; and there is reason to believe that a careful cultivation of it, in reference to the natural history of man in health and disease, would materially assist the completion of a philosophy of medicine, by pointing out to the physicians of every part of the world the comparative merits of various modes of practice, the history of disease in different ages and countries, the increase and decrease of particular maladies; the tendency of certain situations, professions, and modes of life, to protect or to expose; and by indicating, as the basis of prognosis, those extended tabular views of the duration and termination of diseases, which are furnished at successive periods by hospitals and civic registers." (P. 2.)

Medical statistics affords the most convincing proofs of the efficacy of medicine:* it is one of the easiest arguments that can be employed to refute the vulgar notion that nature is alone sufficient for the cure of disease, and that art as frequently impedes as it accelerates her course. The powers of self-restoration are in no diseases more conspicuous than in fever.

"But, if we form a statistical comparison of fever treated by art with the results of fever consigned to the care of nature, we shall derive an indisputable conclusion in favor of our profession. Hippocrates has left a frank and explicit statement of the history and fate of forty-two cases of acute disease, in which it does not seem that any therapeutical plan was adopted, if we except clysters and suppositories in a few, and bloodletting in one. Amongst these were thirty-seven cases of continued fever, without local affection. Of the thirty-seven, twenty-one died, above half of the whole. But, if we examine the returns of the Fever Hospital of London, we find (in 1825) that the total mortality was less than one in seven; and half of these deaths occurred within seventy-two hours of the admission of the patients, a circumstance which indicates that several entered at a period of disease when the hope of recovery was extinct. In the Dublin Fever Hospital we find a

* The writer in the "Morning Herald," who has lately indulged in such violent, ridiculous, and unfounded tirades against the whole of the medical profession, would do well to dip into the science.—REV.

still lower mortality: the average from 1804 to 1812 was one in twelve; and in the clinical wards at Edinburgh, in 1818, the mortality of fever was also about one in twelve. Of five cases of local inflammations which Hippocrates records, four were fatal. Of all his forty-two patients, in short, twenty-five were lost; a termination which throws no shade over his skill, but only brings to light his love of truth. The mortality belonged to the age, and not to the physician; and we may reasonably infer that, under other practitioners of his time and country, it was even more severe. It is curious to observe that, of the five cases of local inflammation, the only one which survived was the solitary instance in which bleeding was employed, a pleurisy. We perceive that one out of two acute cases may recover by the almost unassisted efforts of nature, but that, under the medical protection of our own age and country, six out of seven, or even eleven out of twelve, are likely to survive, according to the period of the disease at which they are placed under treatment." (P. 3.)

Medical statistics alone enables us to form an estimate of the influence of various mechanical improvements on the air of certain districts. The town of Portsmouth, for instance, is built upon a low portion of the marshy island of Portsea. It was formerly very subject to intermittent fever; but, since it was paved and drained in 1769, this disorder has no longer prevailed; while Hilsea, and other parts of the island of Portsea, retained the aguish disposition until 1793, when a drainage was made, which subdued its force.

In almost every civilized country of Europe we find every succeeding ten years produce a smaller annual proportion of deaths; and "in Britain the value of life is nearly doubled, if we compare Büsching's rate of one in thirty-two with the actual rate afforded in 1821, of about one in sixty." But the decline in the mortality is even more remarkable in our cities than in the rural districts.

"While the metropolis has extended itself in all directions, and multiplied its inhabitants to an enormous amount; or, in other words, while the seeming sources of its unhealthiness have been largely augmented, it has actually become more friendly to health. Not only its comparative mortality is greatly diminished within the last half century, but its absolute mortality in respect to preceding centuries. In the year 1697, for example, the total deaths were about 21,000; whereas, a hundred years after, in 1797, the amount was only 17,000; and, when we consider the great increase of the inhabitants of the outparishes at the latter period, the change in the health of London will be seen in a powerful light. But it is singular that this healthy condition seems to have been particularly produced within the last fifty or sixty years; during the very period in which it has most rapidly enlarged its limits and its

population. In the middle of last century, the annual mortality was one in twenty; it is now (or by the census of 1821) about one in forty. So that, in the space of seventy years, the chances of existence are exactly doubled in London; which is a progress and final result without a parallel in the history of any other age or country." (P. 18.)

In the peculiar circumstances of Ireland, it would be very interesting to know the average mortality; but, unfortunately, no correct parochial registers have been kept.

In Chapter iii. the author shows the superior salubrity of Great Britain, by a general comparison with other countries. On the continent of Europe, we find that changes in the duration of life have been experienced, similar in nature, and following the same laws, as those of our own country, but very inferior in degree.

"Since the late peace, the principal governments of Europe have paid much attention to statistics, and we possess very instructive returns from nearly all the countries, cities, and hospitals on the continent. A comparison of these results enables us to submit a very interesting conclusion, and one which we are not aware to have been as yet generally received, namely, that the mortality of Great Britain, its cities, and its hospitals, is greatly inferior to that of any other country in Europe; and that it is incontestible that Great Britain is at present the most healthy country with which we are acquainted; and that it has been gradually tending to that point for the last fifty years." (P. 30.)

In the comparisons which Dr. Hawkins has made for the purpose of supporting this assertion, he has confined himself to the most recent and genuine details. It is remarkable that this superior value of life in Great Britain is not confined to any particular districts or classes of individuals.

"It has been long the fashion, both abroad and at home, to exhaust every variety of reproach on the climate of our country, and particularly on the atmosphere of London; and yet we shall find that the most favored spots in Europe, the places which have long been selected as the resort of invalids and the fountains of health, are far more fatal to life than even this great metropolis." (P. 31.)

The country which approaches most nearly to us is the Pays de Vaud, where the mortality is one in forty-nine. The annual proportion of deaths at Montpellier was greater thirty years ago, and is greater at present, than in London; and,

"although the mortality of great cities is usually much larger than that of provinces or counties, yet the mortality of London is exactly the same at present as that of the department of the Herault, the southern and fertile, and long-supposed most salubrious, district

of France, of which Montpellier is the capital. Finke, a German writer who wrote on medical geography in 1792, speaks with surprise and reprobation of the custom which then prevailed in England of sending invalids to the south of France; and declares that the cutting winds of those quarters annually destroyed many of those wanderers in quest of a milder sky." (P. 31.)

In the next two chapters we have brief, yet interesting, sketches of the medical statistics of various countries and cities.

Chap. vi. *Medical statistics of general hospitals.*—Although it is true that the principal object of hospitals is the relief of the sick poor, another benefit may be derived from them, an abstract of their multiplied experience; without which their utility, as a source of information to our profession, is greatly abridged. Such reports not only tend to improve the economical arrangement of hospitals, but they also collect and accumulate a store of evidence on the history of disease, which can scarcely be acquired in the most extensive private practice.

"Next to the influence of national causes, the mortality of hospitals is most affected by position and internal economy. These circumstances appear more powerful than even the various merits of practice; and, happily for mankind, they are advantages of a definite nature, easily comprehended, and of late years generally demanded. The case was formerly very different, when a singular prejudice or indifference existed in respect to ventilation. At the Leeds hospital, no case of compound fracture nor of trepan survived. At the Hôtel Dieu of Paris, compound fractures were almost always fatal, and few survived amputation. The system which will bear improper air with impunity during health becomes keenly susceptible of its mischief when diseased, and a change of air will often restore where the strictest diet has failed." (P. 77.)

Mortality, says Dr. Hawkins, is *seldom* to be assigned to the influence of bad practice, which probably does not often *destroy* life. From a comparison instituted between the mortality under three physicians in the same hospital, of whom one was *expectant*, one *tonic*, and one *eclectic*, it was found that the mortality was the same; but the length of the disorder, the character of the convalescence, and the chances of relapse, were very different. Moliere, then, it appears, has been too hard upon the medical tribe; for we rarely kill, although we often fail to take the shortest road towards the completion of the cure.

In this chapter, annual and other reports are given from different English and foreign hospitals, which will be found very useful to the medical statist. In the great general hospital, the Charité, at Berlin, which can contain 1000

patients, many are received who pay a small sum for separate rooms and superior accommodation; "a plan which is also encouraged at the great hospital of Vienna, and appears to deserve imitation in our own cities, particularly where the funds of an hospital are not of a permanent nature."

Statistics of the stillborn:

"It is scarcely necessary to prove that abortions and still-births are far more frequent amongst the unmarried than among married women. If we observe what happens among the most unfortunate of the former, as in the Hopital des Vénériens at Paris, the excessive proportion of two children out of seven are born dead; and in a similar establishment at Hamburg, the proportion is one in three. If we take a whole town, as Gottingen, only three per cent. of the children born in marriage are stillborn, but so many as fifteen per cent. of those born out of wedlock." (P. 125.)

The statistics of foundling hospitals, and of the diseases of children, and the remarkable diminution which has gradually occurred in the mortality of infancy, form the subjects of the eighth chapter. Whatever may be thought of the *policy* of foundling hospitals, the feeling which created them can only excite respect. Our author cannot help agreeing with Malthus, Beck, and others, that their utility, under any system of *indiscriminate* admission, is highly questionable. It is shown, from various reports from several of such institutions, that they have done very little towards the preservation of infant life; and it is urged that the facilities which they afford corrupt the maternal instinct, and offer a premium to seduction. The foundling hospital of London deserves priority of mention, not merely on account of its excellent economy and the good health of its inmates, but from its standing alone in the principle of rejecting *secret* or *indiscriminate* entries.

"In every hospital where foundlings are indiscriminately received, the mortality appears to be beyond the control of all attention or skill. In Paris, at present, of 1000 foundlings admitted, 251 are ascertained to die during the first few days, and 235 more on their road to the country nurses, or before the end of the first year; so that at that period only half remain alive. It seems that the frail tenure by which an infant holds its life will not allow of a remitted attention, even for a few hours; and that the desertion of a child by its mother, at the very time when, of all others, it stands most in need of her care, is in the event nearly equivalent to its destruction." (P. 132.)

The ninth chapter contains a few brief remarks upon the different asylums for the insane. Upon this subject the excellent work of Dr. BURROWS will be consulted with much advantage.

In the chapter upon the increase and decrease of diseases in different countries and cities, we have the following gratifying paragraph: "At the close of the last century, the deaths from consumption had gradually increased from about fifteen per cent. to twenty-six per cent. of the total mortality. From 1799 to 1808 they still increased, being then above twenty-seven per cent. From 1808 to 1818 they, however, declined to twenty-three per cent.; and from 1818 to 1825 they have become still less numerous, being at length only twenty-two per cent., nearly the same proportion as at Paris. At Vienna, it is about seventeen per cent."

Chap. xiv. "*Influence of various conditions, professions, and modes of life, on longevity. Average quantity of disease attendant on particular pursuits.*"—The comparative mortality and longevity of the various classes of society seem to have been formerly balanced by conjecture alone, and it appears to have been even a prevalent opinion that poverty was favorable to long life; that it exempted from numerous diseases which follow in the train of luxury and wealth; and that the affluent individual, if desirous of attaining to old age, would find it his interest to imitate the habits or diet of the peasant.

"The contrary has been brought to light during the present century by a rich variety of facts; and the present conclusion is, that, in general terms, poverty, cold, and moisture, (which two latter circumstances are generally included in the first,) are the greatest enemies to the enjoyment of health and long life, and that competence, or an easy condition, is the strongest safeguard of the body. Of an equal number of infants taken among the poor and the easy classes, it will be found, at least in France, (where the argument has been the most agitated,) that the proportion of deaths among the former is double; and that, wherever is the greatest portion of misery, there will also attend the largest share of mortality. In epidemic visitations, the mortality begins and ends with the poorer classes, and on these are their principal ravages exhausted. It seems to be partly on this account that women (at least in England) die in a less frequent proportion, and are longer lived on the average than men, because they are usually more secluded from the conflict of life, are less exposed to vicissitudes of weather and to severe labour. In France, on the contrary, where the women, in every rank, take a more active part in worldly affairs, and where, among the lower orders, they perform a large part of the manual and out-of-door employments, their mortality (on a late average formed during the six years from 1817 to 1823) appears to be nearly the same as that of the men. Buffon had previously observed, that, in most rural districts, the mortality of females was somewhat higher than that of males, on account of

toils unsuited to their frame, which they were there compelled to undergo, and which, it may be added, usually imprint on the female peasant of continental Europe the stamp of old age before she has attained the age of forty." (P. 206.)

From the Paris tables of mortality for 1818, it appears that the mortality of women is not greater at the *critical* period of life than at any other, and that it increases at an advanced age. The conservative tendency of an easy condition is strongly marked by the very inferior degree of mortality and of disease which occurs among persons insured at the various life offices.

"On the other hand, let us observe how great is the mortality of man in his lowest state of want and degradation. It was formerly computed that a fifth or sixth part of the negro slaves died annually. The free Africans who serve in our troops have been said to lose annually only three men out of 100, while the slaves were losing seventeen in 100. At present, however, their mortality decreases in proportion to the superior care taken of them: of about 20,000 slaves landed at Rio Janeiro in 1823, only 1400 had died on the voyage; which would still form an enormous proportion for Europeans, but is a happy contrast to the former returns of a slave ship." (P. 209.)

It is a curious fact, that while the epidemic fever raged in Ireland a few years ago, the army suffered comparatively little from it, because the private soldier is better fed, lodged, and clothed, than the peasant of Ireland. The prevalence was nearly twice greater among the inhabitants than among the army.*

"Cultivation of the sciences appears particularly favorable to longevity, in spite of various assertions formerly made to the contrary: it almost seems that the man who labours chiefly with his mind has a fairer prospect of life than one whose body alone is occupied. Franchini has enumerated 104 Italian mathematicians of different epochs: he has ascertained the ages at which seventy of these died, and among the seventy are eighteen who had attained the age of eighty, and two of ninety; and this, too, in a southern climate, which is not generally very favorable to old age. In France, 152 men of science and letters have been taken at random: half the number appear to have cultivated science, and about half to have been devoted to general literature: on adding together the age at which each died, it was found that the average result would be above sixty-nine years for each of the 152 individuals." (P. 211.)

This statement is certainly opposed to the general belief upon the subject, and we are disposed to think that, if a

* BARKER and CHEYNE, Account of the Fever lately epidemical in Ireland. London, 1821.

more extended comparison were drawn between mental and corporeal labourers, the mortality of the former would be much greater than that of the latter, at a comparatively early period of life.

A statement has been lately published of the deaths which occurred among a society of fifty *plumbers*. "During seven years fourteen members have died, all under thirty-six years of age, and through diseases induced by their business. Dr. ALISON believes that there is hardly an instance of a *mason* regularly employed in hewing stones at Edinburgh, living free from phthisical symptoms to the age of fifty."

Dr. Hawkins concludes, with Dr. Heberden, junior, that the presence of infectious matter is not alone sufficient to make the plague epidemical, but that some concurrent state of the air and of the human body is likewise necessary; and that our long exemption from this evil is not so much to be attributed to any accidental absence of its exciting causes, as to our own change of manners, our love of cleanliness and ventilation, which have produced amongst us, if not an incapability, at least a great inaptness, any longer to receive it.

Chap. xv. "*Statistics of the Sexes. Comparative fruitfulness of marriage in various countries.*"—HUFELAND asserts, from extensive examination, that the relative numbers of the sexes are in all parts of the world the same, namely, twenty-one males to twenty females.

"Some curious facts have been communicated to the French Academy of Sciences by M. Giron de Buzareingues, relative to the inequalities which occur in different departments of France, in the proportion of male and female births. Of course they are not cited here as establishing a general principle: their value must be determined by a series of observations in other places.

"M. Giron has made several experiments on sheep, horses, and birds, which indicate that, when the male is too young, and the female in full vigor, the proportion of female births exceeds that of male, and *vice versa*. He affirms that, by attention to this circumstance, we may at will produce an excess of males, or of females, in our flocks, studs, and poultry-yards.

"Pursuing these inquiries with regard to the human species, he divides individuals into different classes: the first is composed of persons whose employments tend to develop their bodily powers; the second, of those whose business tends to enervate; the third, of those whose occupations are of a mixed description. He found that, in the first class, the number of male births exceeded the average proportion of male to female births throughout France; that, in the second class, the number of female births exceeded the average proportion of female to male births throughout

France; and that, in the third class, the proportion of male to female births was nearly the same as the average proportion throughout France.

"He arrives at the conclusion that the pursuits of agriculture tend to the increase of the male population, and that the habits of commerce and of manufactures favor an augmentation of the female population." (P. 222.)

Many tabular reports are given of the diseases of various hospitals in different countries, which are highly important and interesting. We could not insert these in our sketch of Dr. Hawkins' work, but it is proper to observe, that they form one of its most important features.*

Dr. Hawkins has offered the present volume as a "first attempt to sketch the outlines of a system" of medical statistics; and, from the industrious research with which he has collected his materials, and the ability with which he has employed them, we hope he will continue his investigations upon so important an inquiry, and that he will, at some future opportunity, favor the profession with a more elaborate work upon the subject.

Observations on the Phrenological Developement of Burke, Hare, and other atrocious Murderers; Measurements of the Heads of the most notorious Thieves, presenting an extensive Series of Facts subversive of Phrenology. By THOMAS STONE, Esq. Psq. President of the Royal Medical Society, Edinburgh.—Edinburgh, 1829.

Answer to "Observations on the Phrenological Developement of Burke, Hare, &c. by THOMAS STONE, Esq." By GEORGE COMBE.—Edinburgh.

A Rejoinder to the Answer of GEORGE COMBE, Esq. to "Observations on the Phrenological Developement of Burke, &c." By THOMAS STONE, Esq. President Royal Med. Soc. Ed.

Anti-Phrenology; or, Observations to prove the Fallacy of a modern Doctrine of the Human Mind, called Phrenology. By JOHN WAYTE, M.D. Lynn-Regis.—Baldwin and Cradock, London.

It is not to be imagined, from the above pompous display of titles, that we are about to plunge either ourselves or our readers into a formal discussion of the extensive, and we fear inextricable, maze of phrenological perplexities. We merely intend to present to our friends, more perhaps for their amusement than their edification, a few anti-

* For every information relating to the general, medical, and statistical history of the present condition of public charity in France, comprising a detailed account of all establishments destined for the sick, the aged, and the infirm, for children, and for lunatics, we refer our readers to the very excellent work of Dr. DAVID JOHNSON, which has been recently published.—ED.

phrenological truths, which the phrenologists will quickly refute, or the inevitable conclusion must be, that their science *has* been, but *is* no more. The supporters of the "science," warmed by enthusiasm into a very dangerous degree of confidence, exclaim, "Assail our facts, and we are undone!" Mr. STONE takes them at their word, and, in our opinion, very clearly shows that their facts are fables. We shall devote a page or two to the inferences Mr. Stone has derived from his investigations; then briefly state our opinion of Mr. COMBE's "Answer" and Mr. STONE's "Rejoinder;" and conclude a very brief article by selecting a few of the obstacles which Dr. WAYTE has thrown in the path of the phrenologists, in his argumentative and very temperate pamphlet.

The following are the inquiries which Mr. Stone has instituted:

"1. Does the phrenological developement of the murderer Burke correspond with his acknowledged character?

"2. Does the phrenological developement of his infamous accomplice Hare correspond with his acknowledged character?

"3. Is it possible to distinguish the crania of murderers from other crania, by the phrenological indications attributed to them?

"4. Do the most notorious thieves possess the organ of acquisitiveness larger, or that of conscientiousness smaller, than individuals of exemplary character?"

The organ of destructiveness in Burke has been called *large*. Mr. Stone inquires into the correctness of this report, and compares it, both in its absolute and relative size, with the same organ in two series of crania. With fifty crania, principally British, collected by Sir William Hamilton, and with the same number collected by Dr. Spurzheim, which are now in the Edinburgh Museum. The organ of amativeness was also particularly attended to, as Burke manifested the propensity attributed to it in an excessive degree. The counter-phrenological propositions which result from Mr. Stone's examination are:

"1st. The organ of destructiveness in Burke is absolutely and relatively *below* the average size, whilst benevolence and conscientiousness are absolutely and relatively *above* the average size.

"2d. The cerebellum* in Burke was also below the average size."

The counter-phrenological propositions deduced from the case of Hare are:

"1st. The organ of destructiveness is, in this atrocious murderer, *not above* the average size.

* The supposed seat of the organ of amativeness.

"2d. Many individuals of exemplary character, at the same time that they possess the organ of destructiveness larger than Hare, exhibit a greater deficiency in the alleged organs of benevolence and conscientiousness."

From the measurements of the crania of sixteen murderers, Mr. Stone derives the following reply to the third question:

"1st. The most atrocious murderers not only fail to possess a large endowment of the alleged organ of destructiveness, but have it very frequently, both *absolutely* and *relatively*, below the average size.

"2d. The most cruel and horrid murderers frequently possess a high developement of the pretended organs of the moral sentiments, particularly those of benevolence and conscientiousness.

"3d. Murderers do not possess a less developement of the supposed intellectual organs, nor a greater developement of those to which the animal propensities are referred, than individuals of high intellectual and moral character."

To determine the fourth question, Mr. Stone has taken measurements of the organs of acquisitiveness and conscientiousness, and at the same time the general size of the head, in an unselected class of individuals, English, Scotch, and Irish; and compared these with similar measurements from the heads of all the most notorious thieves in the Edinburgh jail and bridewell. The counter-phrenological proposition deduced is, "that the organ of acquisitiveness is often *absolutely* and *relatively less*, and that of conscientiousness *absolutely* and *relatively larger*, in the most notorious thieves, than in individuals of exemplary character."

The only comment Mr. Stone conceives it necessary to make on these deductions is expressed by Mr. Combe, who, in speaking of the truth or falsehood of phrenology, remarks: "If two individuals were found to possess a larger developement of acquisitiveness; but if in the one conscientiousness was very large, and in the other very small, and we were told that the one was a thief, and the other an honest man, how complete would the refutation be, if the one possessing the larger conscientiousness were found to be the rogue."*

It is proper to add, that the facts which led Mr. Stone to the conclusions above stated were taken without selection. In living individuals, the measurements of the first who presented themselves were taken, and the same plan was adopted with the crania; nor did Mr. S., in a single instance, reject the measurement of a person or cranium,

* Phrenological Transactions, p. 323.

because it did not appear to correspond with anti-phrenological evidence.

Mr. Stone's "Observations" have been followed by Mr. Combe's "Answer," and next comes Mr. Stone's "Rejoinder." We may be allowed, *en passant*, to return our thanks to Mr. Stone for *both* these last pamphlets. The two were tacked together, and forwarded to us, "with Mr. Stone's compliments." We state this circumstance for the purpose of showing that Mr. S., at least, conducts the combat fairly and fearlessly; for he himself furnishes us with the arguments of his opponent.

We have read, deliberately and attentively, both the Answer and the Rejoinder, and, as far as we are capable of judging, Mr. Stone clearly shews that Mr. Combe has not succeeded in his attempt to prove the fallacy of the anti-phrenological deductions which we have just extracted from the "Observations on the Phrenological Development of Burke, &c." One passage from Mr. Stone we cannot forbear from giving:

"Mr. Combe states that Mr. Stone's prior pamphlet, his boasted 'Evidences against Phrenology,' has been dissected by an *able* writer in the London Medical and Surgical Journal, and wonders the newspaper editors of this city (Edinburgh) were not aware of this circumstance. Mr. Combe thus appears to sanction the statements of that writer; but will *he* become responsible for their insinuated veracity? Will *he* reiterate, on his *own* authority, the same accusations of 'misrepresentation,' 'erroneous quotation,' 'glaring interpolation?' &c. If so, I will answer him; but I will not, for a moment, think of noticing a scurrilous *anonymous* production, wherein I recognize neither the style of a gentleman nor the information of a scholar."

The "Anti-Phrenology" of Dr. Wayte has so recently appeared in the field, that the phrenologists have not yet had time to reply to it. We assure them that this little work is especially worthy of their attention; and, *when* they refute the various arguments it contains, we shall be among the first to do justice to their ingenuity. If they will condescend to accept our advice, they will not assail the man, but be contented with attacking his matter.

As we have determined to confine this extra-practical article within very moderate bounds, Dr. W. will excuse us if we select but one or two of the very satisfactory anti-phrenological doctrines with which his pages teem. Dr. Spurzheim says, "With respect to many individual parts, I have been certain of their *functions* for a long time, and

I could challenge any one to bring me an exception; but of some others I will not speak so decidedly."* To this remarkable confession of uncertainty in "the science" by such authority, Dr. Wayte very properly replies,

"Had phrenologists not delineated on the head any other organs than what they knew to a certainty, we might only be induced to think them rather dogmatical; but, when we find them depicting as exactly organs whose existence, and even nature, are doubted, then we have a legitimate right to question and distrust the accuracy and soundness of the whole science; for surely it evinces great imperfection to map out a brain into so many distinct faculties, name them definitively, and then be uncertain as to the reality of many. What should we think of a geographer, who, having clearly delineated the several places of a newly discovered country, afterwards informs us in his work that he could not speak decidedly as to some of them? Would his chart be worth a groat?"

Dr. W. now attacks the key-stone of phrenology: he shews, by the clearest arguments, that the principal tenet of the phrenologists, namely, plurality of organs, is founded upon the loosest reasoning, and that it has no foundation either in anatomy, physiology, pathology, or analogy. Another tenet has been broached, equally hypothetical.

"They (the phrenologists) assert that the brain is double, yielding a duplicate of each organ, inferred by their favorite mode of reasoning, from their being two eyes, two ears, and likewise from the nerves being given off in pairs. By this ingenious device, they in some measure overcome an argument which must otherwise completely refute their system: (to wit) that considerable portions of brain may be lost from injury, without any apparent diminution of intellect upon recovery; and their explanation of this is that the *corresponding organs* on the opposite side remain sound. There are, however, no solid arguments in favor of a double function of the brain, nor even of a perfectly double structure. True it is that the brain *apparently* consists of two halves; that it sends off from its base the nerves in pairs, one to each eye, to each ear, and so on; but it should be particularly borne in mind that there is an union or commissure between the two halves, and that their function is single. The motion of both eyes is quite synchronous, and their vision one: we have no double hearing, smelling, or tasting; and it is not because one eye may be lost, or one sense of hearing gone, or one limb removed, that we are to infer a double structure and action of the brain; for the analogy, to be just, should extend further. Thus every one knows that man can exist and officiate with only one eye, one ear, or one arm, &c.; and, since phrenologists inform us that, when one or more

* Dr. Spurzheim's Third Lecture, *Lancet*, vol. vii.

organs on either side of the brain are lost from injury, their *fellows* supply the defect, they ought, upon this principle, to make him exist, and perform all intellectual and animal functions, with only one *half of his brain*; when they can demonstrate this by showing me the man that under such a condition can 'live, and move, and have his being,' all my opposition shall cease."

We can follow Dr. Wayte no further in his very able and temperate refutation of phrenological fancies. We must conclude by observing, that the phrenologists have no right to expect others to agree with them until they agree with themselves. At present the advocates of the doctrine are at variance upon some of the most essential points of their creed; and, as a proof of the degree of confidence which is to be placed upon the practical application of the art, we may remind our readers of an anecdote mentioned by Dr. BURROWS. Dr. Gall was requested to say, from the organs exhibited on a certain bust, what was the predominant propensity or faculty of the individual. He pronounced the original must be a great poet. His attention was directed to a second bust: he declared the latter to be that of a great mathematician. The first was the bust of Troughton, the eminent mathematician; and the second that of Sir Walter Scott! Mr. Chantrey also exhibited to Dr. Gall drawings of numerous heads. The cranioscopist selected one, whose ample cerebral developement gave a sure index of vast talent: it was a fac-simile of the head of the Earl of P-mf—t! Very recently, too, a most zealous and well-practised phrenologist discovered, from his examination of the head of a woman who had been hanged the day before for the murder of her child, that she must have had a *great attachment* for her children!

Let it not be imagined that we wish to insinuate the phrenologists wilfully attempt to deceive the public: they are enthusiasts, and deceive themselves.

An Essay upon the Treatment of the Deep and Excavated Ulcer; with Cases. By RICHARD ANTHONY STAFFORD, Member of the Royal College of Surgeons, and lately House-Surgeon to St. Bartholomew's Hospital.—8vo. pp. 72. Longman, 1829.

EVERY practical surgeon must be aware that when an ulcer has eaten deeply into the substance of the flesh, and has thus formed a cavity, that the process of healing is extremely slow. Among such ulcers may be enumerated the open bubo which has burrowed deeply, and excavations which have been formed by the rapid destruction of the part by sloughing phagedena, or from any other cause; old in-

dolent ulcers of the legs; indolent and deep ulcers arising from scrofula; in short, such as are situated in any part of the body where considerable substance has been lost. Hitherto cases of this sort have been far from obedient to any of the various plans of treatment that have been usually adopted. Mr. STAFFORD, amongst others, has perceived how much room there was for improvement in our practice in such cases, and he has exerted his ingenuity to devise a more successful and less tedious process of cure. The treatment he proposes has the merit of simplicity and perfect safety.

"It consists in pouring into the excavation melted wax, of an extremely adhesive quality, and just at that temperature when it is on the point of cooling, and will immediately become solid in the wound. In this manner the under surface of the wax, when cold, comes in close contact with the general surface of the ulcer, and the whole excavation is filled by it. Before employing it, however, it is necessary that one or two precautions should be taken: first, in order to clean the sore, as much of the pus as possible which rests upon it should be absorbed by dry lint; and secondly, in order to avoid burning the patient, the wax should be at that point of heat which is called by chandlers *setting*; that is, a portion of it should cling to the sides of the vessel in which it was melted, and the rest should begin to thicken, and have somewhat of an opaque appearance. In this state it will not be at much more than blood heat, and it can be used with perfect safety. It is advisable, however, even when so far cooled, that a brush be dipped into it, and that the wax be allowed to drop from that into the sore. After the wax becomes perfectly solid in the ulcer, a strip or two of adhesive plaster may be applied over it, to keep it in its situation; when it may be left until it requires to be dressed again, which will be on the third day after its application. By pursuing this method of treatment, it will be found that healthy granulations will be produced, and appear upon the whole surface of the sore; that it will contract; and that the healing process will proceed very rapidly."* (P. 4.)

Mr. Stafford does not imagine that the good effects which result from this treatment are entirely referable either to the complete exclusion of air from the affected part, or to the uniform pressure kept up upon the ulcer. He believes that the wax, being a foreign substance lodged in the excavation of the ulcer, becomes subject to the laws by which extraneous matter is expelled from the body. According to the idea he has formed of this process, the part immediately above the foreign body ulcerates, and from beneath

* The wax alluded to may be procured at Field and Son's, Wigmore street. It consists of four parts white wax, and one part Venice turpentine.

it a new growth is established, which pushes it on until it arrives at the surface.

"Let us suppose, for example, that a piece of dead bone, or foreign matter, is lodged in the fleshy part of the thigh: how will nature throw it off? First, the part above it will ulcerate; and, secondly, a new growth will take place from beneath it; whereby not only will the bone be forced on, and thus, by the pressure it makes above, the ulceration will be continued, but the cavity which must necessarily be made by it will in this manner be filled up." (P. 9.)

When an extraneous body is buried in the substance of the flesh, the process by which it is expelled cannot be seen; but when the death of a part (which consequently becomes a foreign body) takes place on the surface, we may see the progress of nature in the operation.

"The mortified part is first separated from the living by ulceration, which forms a kind of *cordon sanitaire* all around it, gradually extending beneath it, from the edges to the centre; and, as fast as the separation takes place, granulations spring up from the interior of the excavation, and, by the time the whole process is completed, the cavity is nearly filled by them. In this manner the mortified part is protruded by the granulations, and expelled from the situation it previously occupied." (P. 10.)

Mr. HUNTER slightly alludes to this fact.* Mr. Stafford grounds the basis of his treatment upon the second process, viz. the springing up of granulations upon the surface of the ulcer, to throw off the extraneous matter resting upon it.

"The wax may be considered to be the foreign body, or mortified part, separated from, but in close contact with, the ulcer; and, as it is one of nature's laws to throw off extraneous matter, granulations are engendered upon its whole surface to effect this purpose; and thus a natural process is imitated. That this is the case may be inferred from the solid wax, after a time, being found partly thrust out of the cavity; and, if removed, it cannot be made to adapt itself as before." (P. 12.)

Having endeavoured to explain what he conceives to be the process of the healing of an ulcer, when filled with the wax, Mr. Stafford proceeds to point out the process by which it heals; the superiority of this plan of treatment; and the cases in which it will be advantageous. The progress by which a sore heals must in some measure depend upon its size, the health of the patient, &c. The stages by which the reparative process is usually carried on, when treated with the wax, is as follows:

"On the removal of the first dressing, the sore generally presents

* Hunter on the Blood, &c. vol. ii. p. 361.

a cleaner surface, being more reddened; and sometimes, even in the early stages, granulations are distinguishable. After the second dressing they are commonly spread over the whole surface of the sore; on the third, they partly fill up the cavity, which is much contracted; and on the fourth, it appears still less; and so on until it is completely closed, and then the skinning process commences. During the course of healing, likewise, it may be observed that the granulations are smaller, more compact, and more florid. The cicatrix also presents a more even surface; it is of a firmer texture, less tender, and does not appear so likely to break out again as the scars of those ulcers which have not been treated according to this plan." (P. 14.)

By this plan Mr. S. assures us that the sore is healed in one third of the time usually occupied, and with much greater certainty than where the common methods are employed. That it succeeds where no other remedy will, is shewn by the cases. The pain when the wax is upon the sore is so trifling, that many patients have not only been unconscious of its presence, but even of the existence of the sore itself. The treatment is applicable to ulcers of any depth, from whatever cause they may arise. When the ulceration has been extending, its progress has been immediately arrested, and it has shown a disposition to heal; and, when the sore has been connected with varicose veins of the legs, it has been attended with great advantage.

"Although there are very few species of ulcers where this method of treatment might not be successful, yet it offers peculiar benefit in many cases which before defied all other remedies: for instance, in sores situated over large arteries, where there is danger of the ulcerative process being continued into the vessel. Such cases are not uncommon; and, to my own knowledge, several patients have died in consequence of every application having proved ineffectual to stop its progress. In these instances it is customary to apply stimulating remedies; but every practitioner must have observed that such dressings have too often accelerated the catastrophe they have intended to ward off. Here, then, the use of the wax might be of singular advantage, by producing healthy granulations, and at the same time protecting the artery. The same plan of treatment might likewise be resorted to in all extensive sores, such as burns; and thus not only might they be made to heal more quickly, but they would likewise be shielded from objects around them. There are some species of ulcers, also, whose peculiar character it is to spread; for instance, herpetic sores, noli me tangere, and cancerous ulceration; and if the principle which I have pointed out as to the action which this plan of treatment induces in the ulcer be correct, it might possibly be of infinite service in these cases, in putting an end to, or at least stopping the progress of, the ravages of the disease; and more particu-

larly when it is extending itself into parts so full of blood-vessels that there is reason to apprehend the death of the patient from hemorrhage. I have not had an opportunity of employing it in any of these cases, excepting in cancerous ulceration, where its effects in producing granulations was extraordinary; consequently I am unable to bring forward any facts to establish its utility, and therefore I merely offer these remarks as a suggestion." (P. 18.)

We are not to place such unlimited confidence in any local treatment as may induce us to neglect constitutional remedies, if the health be deranged.

We shall select two or three of the cases detailed by the author. It may be proper to observe, that the plan has been so successful, and in such a variety of instances, that Mr. CHARLES PHILLIPS almost always resorts to it in the cases that occur in the St. Marylebone Infirmary.

CASE I. *Ulcerated Legs*.—John Covill, æt. forty-nine, has had an extensive ulcer for twenty-five years. About ten years ago it healed for a short time, but it broke out again almost immediately, and has remained open ever since.

"The sore, as it now exists, occupies nearly the whole space between the calf and the ankle, and extends nearly all round the circumference of the leg. It is about one third of an inch in depth, of an excessively foul character; and the discharge issuing from it is extremely offensive. Applications of every description have been employed, without its showing the least disposition to heal or to change its character. Under these circumstances, and as the man had been crippled by it for many years, it was proposed that the limb should be amputated. The patient, however, would not consent to the operation." (P. 22)

Upon the principles above explained, Mr. Stafford procured some wax, of as adhesive a quality as possible, melted it, and, as it cooled, poured it into the ulcer.

"The patient immediately expressed relief from its application, and it was left on the sore three days. On the fourth, when it was about to be removed, it was found to be slightly raised; and, on taking it away, the surface of the ulcer was seen, to the astonishment of every one, covered by granulations, and its depth was considerably diminished. These granulations were much smaller than those on healthy sores in general, being about the size of small shot; they were much more regularly disposed, and they ere of a beautiful florid colour.

"Feb. 17.—The sore was again dressed with the melted wax, and on the fourth day was removed. The wound still presented the same appearances as when last seen, excepting that about two thirds of the excavation was filled up. The application of the wax was continued.

"Feb. 21.—The granulations were equal with the surface of the leg; they still retained their diminished character and their florid hue.

"25.—The sore had healed one fourth of an inch all around its circumference, the granulations still having the same appearance.

"28.—The sore still less.

"March 2.—The sore is only half the size it was at first, and the healing process is proceeding very rapidly.

"About a fortnight from this time the man was discharged perfectly cured. The cicatrix was much firmer, and more regular than that of ulcers in general. The medical treatment was simply keeping the bowels regular." (P. 23.)

In the second case, a woman, *æt.* sixty-eight, had extensive ulcers, of considerable depth, on both legs, which broke out thirty years before, and had been open for the last six years. The sores were deep, painful, and of a most irritable character. This patient was under treatment seven weeks, and was then discharged cured. The cicatrices were firm and even, and she has remained well ever since. The medical treatment was simply occasional purgatives.

Thirteen similar instances are related, and as many as from 150 to 200 cases of ulcerated legs have been thus treated with success.

Eight cases of excavated buboes of the groin are next given, to show the efficacy of the practice in a different kind of ulceration. One will be sufficient as an example.

"Philip Quinlan, *æt.* twenty-five. Feb. 20, 1828.—Has an indolent excavated sore in the right groin, in consequence of bubo. It is in length about one inch and a half; in breadth rather more than half an inch; and in depth two thirds of an inch. Its edges are ragged, and it is of an extremely foul character, being covered by a dirty yellow discharge. It has been in this state for more than six weeks, and no application hitherto used has changed its character, or disposed it to heal.

"The melted adhesive wax was applied, and the whole excavation filled with it. No pain was experienced; and, during the whole time it remained on, the sore was easier.

"23.—The wax was removed, and the sore was much improved. Granulations had sprung up from the bottom, and one third of the sore was filled by them. It was again used as before.

"25.—The cavity was filled about two thirds, and the ulcer was much contracted. The edges were less ragged, and the whole surface was covered with healthy florid granulations.

"28.—The excavation was entirely obliterated.

"March 2.—The size of the wound was much contracted, and the skinning process beginning to take place at the edges.

"5.—It is half-healed, much contracted, and its surface very regular.

" 8.—All but healed.

" 11.—Quite healed. The cicatrix is much firmer than common; it is smooth, and there are no ragged edges." (P. 45.)

Two cases of sloughing phagedena, and four cases of scrofulous ulcers, are also detailed; and in these instances Mr. Stafford's mode of treatment was applied with equal success. In two cases of cancerous ulceration in which it was employed, although both terminated fatally, yet granulations were rapidly produced, and thus the ulceration was for a time prevented from extending itself into large arteries.

This plan of treatment ought to be immediately tried upon an extensive scale in many of the numerous cases of obstinate chronic ulceration which occupy our hospitals, and other public institutions, for month after month, to the annoyance of the surgeon and the discredit of his art.

The zeal which Mr. Stafford evinces for the practical improvement of his profession is highly creditable to him.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ANATOMY.

Dr. WEBER on the Skin.—Dr. WEBER is professor of anatomy at Leipzig. In opposition to the opinion of Dr. EICHORN, whose observations were cited in a former Number of this Journal, Dr. W. asserts that the sebaceous follicles of the skin are organs distinct from the bulbs of the hair, and that they exist over the whole surface, excepting the palms of the hands and soles of the feet. The bulbs of the large hair (*gros poils*) are situated very deeply in the derm, and sometimes penetrate even into the subcutaneous adipose tissue: the sebaceous follicles, on the contrary, are nearer to the cutaneous surface, and are never found extending to the adipose structure. Their size, also, says he, is too large to permit them to be confounded with the bulbs of hair, which are much smaller. In new-born children, sebaceous follicles may be discovered on all parts of the skin, with the two exceptions already named. The skin of the scrotum shows them very much developed: each of these follicles is composed of four or five compartments, or cells, agglomerated together; their transverse diameter exceeds their depth. The greatest diameter observed by the author was a quarter of a line.

Dr. Weber also examined the hair of the body, in order to ascertain whether it is hollow, but he found no canal or any cellular structure within it. Neither is this hair cylindrical: it is rather elliptical or oval, like the negro hair, in which the flattened form seems necessary to admit of the curl or twist.—*North American Med. and Surg. Journal.*

M. BRÉCHET on a Cavity and Fluid in the *Membrana Caduca*.—M. B. thinks he has found, in the *membrana caduca*, an undescribed fluid, and which perhaps performs an important part in the nutrition of the fœtus. This fluid should exist in greater quantity in proportion as the allantois and vesicula umbilicalis are smaller. The tomentose portion of the chorion might derive from it the materials of nutriment for the embryo. The cavity of the *caduca* and its liquid remain even until after the third month of gestation.—*Bulletin*.

PHYSIOLOGY.

Influence of the Male extending beyond a single Impregnation.—A seventh Arabian mare, belonging to the Earl of Morton, which had never been bred from before, had a mule by a quagga: subsequently she had three foals by a black Arabian horse. The two first of these are thus described: "They have the character of the Arabian breed as decidedly as can be expected where fifteen-sixteenths of the blood are Arabian, and they are fine specimens of that breed; but, both in their colour and in the hair of their manes, they have a striking resemblance to the quagga. Their colour is bay, marked more or less like the quagga in a darker tint. Both are distinguished by the dark line along the ridge of the back, the dark stripes across the forehead, and the dark bars across the back part of the legs. Both their manes are black: that of the filly is short, stiff, and stands upright; that of the colt is long, but so stiff as to arch upwards, and to hang clear of the sides of the neck; in which circumstance it resembles that of the hybrid. This is the more remarkable as the manes of the Arabian breed hang lank and closer to the neck than those of most others."* Mr. MAYO, who quotes this curious fact in his excellent "*Outlines of Physiology*," observes, that "a similar occurrence to the preceding is mentioned by Mr. GILES, respecting a litter of pigs, which resembled in colour a former litter by a wild boar. The best explanation of these phenomena is to suppose that connexion with the male produces a physical impression, not merely upon the ova which are ripe for impregnation, but upon others likewise that are at the time immature. In gallinaceous birds, in turkeys for instance, it is well known that a single coïtus will actually impregnate all the ova that are laid during the breeding season. The explanation which I have offered seems to me far more reasonable than any supposed influence of the imagination, the effect of which on any occasion, even in human beings, appears more than doubtful."—*Mayo's Physiology*, 2d Edition, p. 489.

Case in which no Division existed between the Ventricles of the Heart.—A case of this kind is related by Dr. WITTCHKE, in *Hufeland and Quann's Journal* for April 1828.

The patient was twenty-four years of age; had from his infancy been affected with a peculiar palpitation of the heart, unattended by any other symptom of disease. Five years ago, after an inflammation of the chest, the palpitation augmented in violence; he appeared sometimes to be in danger of suffocation. The palpitation and sense of suffocation abated when he sat upright, and pressed his breast firmly against any hard body. Medical treatment rendered him no relief: the occurrence of hemorrhoids appeared,

* *Philos. Trans.* 1821, p. 21.

however, in some measure to render his sufferings more tolerable. Finally, the accessions of suffocation became more violent, particularly at night: the only position in which the patient could find any ease was sitting upright. By degrees œdema of the feet showed itself, and extended to the legs; at length the abdomen became distended from effusion, and the scrotum was swollen to a great extent. His countenance was livid, swollen, and of a doughy appearance. The upper extremities presented the same phenomena.

He was first visited by Dr. W. on the 17th of November, 1825: he found him lying in bed, with his head and shoulders greatly elevated, and unable to rise. The preceding night he had suffered a very severe attack of suffocation; for fear of a return of which, he begged, with tears in his eyes, that the Doctor, by puncturing the abdomen, would relieve him of the load of water which it contained, and thus enable him to assume the erect posture. His carotids throbbed violently; the heart beat with such force that the whole of the left side of the chest was shook by its action. The motions of the chest were distinct, commencing above and extending downwards. The pulse was regular, somewhat tense, and moderately full, ninety in a minute. The respiration was rattling, as though some obstruction existed in the trachea. The patient could speak only with great difficulty; the tone of the voice was hoarse and low. The body presented all the symptoms of extensive general dropsy. Appetite and digestion not particularly affected; the tongue very red and clean; great thirst; the skin had the feel of dry parchment. The skin on the fore part of the scrotum, being irritated by the passage of the urine over it, presented an erysipelatous appearance; as also did the calves of the legs. The patient complained of considerable pain of the left thigh.

Notwithstanding the dropsy was to be viewed as an effect of disease of the heart, under which the patient evidently laboured, yet, with the view of mitigating his sufferings, as well as to take off the extreme tension of the skin, from which gangrene was to be feared, Dr. W. punctured the abdomen. Though but a small quantity of fluid was discharged, the patient felt somewhat relieved. Diuretics were directed internally; and, externally, tepid poultices, with acetate of lead and laudanum, to the left inferior extremity.

Next day, near six quarts of water discharged by the puncture; the patient much relieved; had a quiet night. Poultices exchanged for a decoction of chamomile flowers, with acetate of lead and laudanum. Seltzer water to allay the thirst.

On the ensuing day, symptoms the same. Diuretics continued.

On both of the two following days, bowels evacuated; pain of left thigh increased, with redness. Chamomile decoctions discontinued, and a decoction of oak bark, with the same additions, directed.

On the 22d of the month, dropsical symptoms considerably abated; palpitation of the heart much diminished; the patient could stand without assistance, and sat up the greater part of the day in an armchair.

On the 25th, frequent watery stools, weakness, the pulse more frequent and strong. Diuretics discontinued, and frictions to the abdomen of Spirit. Terebinth. and Camph. united by the yolk of an egg.

From this time the patient rapidly declined in strength. On the 29th gangrene of the left thigh. On the 30th, the patient died.

Section cadaveris.—The thorax only examined: it contained about a pint of bloody serum. Lungs healthy, but pressed backwards, in consequence of the augmented size of the heart; they were not greatly distended with blood, and

no' where adhered to the pleura. The pericardium adhered completely to the surface of the heart, with the exception of that part which is next the diaphragm, where not a trace of it was discoverable, the heart lying immediately upon the latter. The heart was at least three times its normal size, and filled with a considerable quantity of black half-coagulated blood; the parietes of both ventricles being of a thickness proportionate to the augmented bulk of the organs. The most remarkable circumstance was the absence of the septum ventriculorum, of which not a trace remained; notwithstanding which, the openings of the great vessels were entirely natural, excepting that those of the veins were somewhat enlarged; the valves perfect. The auricles, with the exception of their increased size, were also in every respect natural. The aorta arose very straight, and was filled with a fibrous coagulum. The veins were collapsed, and contained a small quantity of fluid blood; this was also the state of all the great veins of the chest. The ductus arteriosus was, as usual, entirely closed.—*North American Med. and Surg. Journal.*

Influence of Operations on the Neck on the Nutrition of the Eye.—M. MAYER has experimented for this purpose on several domestic animals. When the great sympathetic was tied in the neck, it occasioned some disorder in the nutrition of the eye on the same side, manifested by inflammation of the conjunctiva. Injury of the nervus vagus is often followed by the same effect. When both the vagus and sympathetic are tied, the effect is more manifest, and the inflammation extends to the interior of the globe of the eye.

When one carotid is tied, not much effect is produced; but, if both are secured, the eyes always suffer more or less, they lose their brightness and their vital turgescence: however, it rarely happens that complete disorganization ensues.

But, if the vagus, great sympathetic, and carotid are included in the ligature, an exudation of plastic lymph takes place on the anterior surface of the iris: this new product, which is membranous, completely closes the pupil. In time, suppuration of the cornea and staphyloma are observed.—*Bulletin.*

On the Functions of different Parts of the Ear.—Dr. CHARLES L. ESSER, in a work crowned in 1825 by the Medical Faculty of the University of Bonn, has been led, by numerous experiments, to the following conclusions:

The cartilage of the external ear seems to contribute little to rendering sounds more clear, but seems to augment their force not only by reflecting into the auditive canal a part of the sonorous rays, especially those that fall into the concha, but also by means of vibration which the sonorous rays produce in it, and which it transmits to the tympanum.

The bones of the head contribute no less than the cartilage to the propagation of sounds. This propagation does not depend solely on the nerves, as was thought by TREVIRANUS, SWAN, &c.; for a watch applied to a swelled cheek ought to produce sounds as clear through the medium of the fascial nerve as if applied on the zygomatic arch, which is not the case. The os occipitis is better fitted for propagation of sounds than the bones of the anterior parts of the head, which depends on its connexion with the labyrinth, and its nearness to the mastoidal cells. The use of these cells is not to prevent an echo in the internal ear, as M. Treviranus supposed; that function devolves solely on the eustachian tube. In many animals, the bones that surround the external ear

are disposed so as to favor, in a high degree, the transmission of sounds, and they offer compensation for the absence of an external ear.

The external auditory canal is evidently the part which contributes most to the concentration and transmission of sounds to the membrana tympani.

The membrana tympani is made to vibrate by the sonorous rays that reach it: nevertheless, this is not the only use of the membrane, for the sonorous vibrations not only may reach the ear without the aid of the membrana tympani, but may even reach it with greater strength. It serves to protect the ear from external injuries.

The eustachian tube is the chief auxiliary to the membrana tympani, and fulfils four different functions.

1. It allows the air contained in the cavity of the tympanum to be in a state of equilibrium with the external air. If this equilibrium be lost, certain anomalous sensations are experienced, such as tinkling and buzzing of the ears. If the quantity of air in the cavity is augmented by strong expirations, then too strong a pressure on the membrane of the tympanum takes place, as well as on the other parts of the cavity, particularly the foramen rotundum: this pressure produces buzzing, which decreases in proportion as the atmospheric equilibrium is restored through the eustachian tube. If the air of the cavity becomes rarefied, and the eustachian tube closed by spasm, then the external air pressing on the membrane finds its way through the pores of that organ, and thus produces the tinkling of the ears.

Both these phenomena disappear as soon as the equilibrium is restored in the cavity, and this may be effected by forcing the air along the eustachian tube by breathing with the nose and mouth closed, or by introducing the end of the little finger deeply into the external meatus, and withdrawing it by degrees, making at the same time pressure against the upper surface of the canal. In this way a vacuum is formed, the membrane is brought back towards the external meatus, and the eustachian tube gives passage to the air that presses into it from the fauces. This explanation manifestly can only apply to the occasional occurrences of buzzing, &c. Chronic examples of these affections depend on cerebral congestions or anomalous actions of the nerves.

2. The second function of the eustachian tube is to admit of the occurrence of vibrations in the cavity of the tympanum, which could not be the case if it were entirely closed.

In cases of deafness occasioned by obliteration of the eustachian tube, perforation of the membrane becomes a means of cure, by re-establishing the communication with the external air.

The idea that the sides of the tube are constantly in contact with each other is incorrect.

3. The tube prevents confused vibrations of the air of the cavity, by giving them a passage outwards.

4. Finally, it serves to lead into the posterior nares the mucus secreted into the cavity and on its own surface.

The *small bones of the ear*, by means of their muscles, are capable of rendering the tympanum more or less tense; but it is difficult to conceive why, and how, this effect takes place. Their influence on the sense of hearing is not very remarkable. They serve to transmit the sonorous vibrations of the membrana tympani to the foramen ovale, although this is not their sole use.

The *labyrinth*, whose anatomical history is sufficiently understood, is still,

and will probably continue to be, the obscurest part of the apparatus of hearing, as relates to its physiology. The experiments of WEBER leave it a doubtful question whether the lymph of *COTUGNI* exists during life, or is a production occasioned by the death of the animal.

The *vestibule*, or the membranous bags which represent it in certain animals, and the semicircular canals, appear to contribute most to the sense of hearing, but it is difficult to say in what manner. Some facts in comparative anatomy seem to show that the principal use of the semicircular canals consists in strengthening the sounds. They are larger in animals whose external ear is less favorably formed or wholly wanting. Large semicircular canals are generally accompanied with a small cochlea, and *vice versa*.

The *cochlea* appears to be of less importance than the semicircular canals; for it soon disappears in the descending scale of animals, and birds only possess a rudiment of it. Its use appears to be, to offer a large surface to the sonorous vibrations, and to strengthen by concentrating them.

The act of distinguishing different objects is a purely intellectual function, which we must not seek for in any particular parts of an organ of sense. This power has been supposed to reside in the cochlea; but if its development was in every case to be regarded as a measure of this distinguishing power, the following order might be established: The capiaia and porcupine, whose cochlea has three turns and a half; the dog and fox, with three turns; man, the cow, the hog, and cat, with two and a half turns; the horse and the dolphin, with two and a quarter; and the hare, with two turns. Birds would occupy the lowest rank in this series. Such facts need no comments.

The part which the *acoustic nerve* plays in the sense of hearing is undoubtedly of great importance, but its manner of acting will always remain an impenetrable mystery.

The author of this interesting memoir finally arrives at the conclusion that all parts of the auditory apparatus concur in the act of sensation; but the sense of hearing itself is not explicable by means of these parts, for, like all the other senses, this is purely intellectual. The soul alone sees and hears, the rest is both blind and deaf.—*Ibid*.

PATHOLOGY.

Remarkable Case of Cataract.—A Swedish Journal (*Arsberättelse om svenska lakare sällskapets arbeten*.) contains the following fact, communicated by Dr. WENDELSTROM.

A robust peasant, æt. sixty, who had always had excellent sight, and who had only suffered from slight gouty attacks, being occupied in cutting wood in a forest, suddenly felt that his vision was obscure. In a few hours he was completely blind, and he was obliged to be led home. He complained of no pain, nor were there any appearances of external inflammation. When he was examined by Dr. W. a few days afterwards, it was found that both eyes were affected with cataract. The operation of extraction was afterwards performed.

Polypus of the Heart.—M. RIGACCI, of Florence, mentions a case where a well-organized polypus was found after death in the heart. A young woman, affected with some disease of the heart, supposed to be an aneurismal dilatation of the left ventricle, after having been treated with digitalis and other means, died on the 18th of December, 1827. On examination of the body after

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death, there was found, among other things, a body of a fleshy appearance, similar to that called sarcoma, in the left ventricle of the heart. This ventricle, very much enlarged, had its walls much reduced in thickness. From the interventricular partition arose one of the roots of the morbid production. Another root took its rise from the auriculo-ventricular valve, by two peduncles. These two united, and formed a round body, two inches and two lines in length, which terminated by a ragged point, the surface of which did not appear covered by any membranous layer. On the external surface of the polypus were seen three reddish fillets, which, arising from the carnae columnæ, extended to the morbid production, and appeared to be lost in its substance. These, examined with a good lens, were found full of reddish fluid, and were recognized as sanguiferous vessels. In order to prove the fact the more satisfactorily, two of the fillets were injected with mercury. One of them burst at the distance of an inch from the introduction of the tube, but the other was completely filled, and exhibited its divisions and ramuscles, which became lost in the substance of the polypus. The polypus, attentively dissected, was discovered to be formed of four or five fibrous strata, superposed one upon the other, and intimately united. The author remarks, that these observations do not permit a doubt that this polypus was properly organized, and that its formation took place before death.—*Antologia Firenze.*

Suppression of the Urinary Secretion for more than seven Weeks, cured.—One of the German Journals contains the history of a case of this nature, recorded by Dr. DE RACUM, of Riga. The subject of it was a child twelve years of age, in whom the secretion of urine was suppressed without occasioning any derangement of the other functions, or without any auxiliary or supplemental process of secretion being carried on during the period above mentioned. The introduction of a silver catheter into the bladder was not followed by the discharge of a single drop of urine. After attempting various other methods ineffectually, Dr. De Racum had recourse to the following preparation, which restored the renal secretion on the third day.

Purified oil of Amber, two drachms; Venice Turpentine, ten drachms; Bal-am Copaiva, one ounce. Thirty drops to be taken thrice a day in emulsion of almonds.

In addition to this, he directed friction with oil of turpentine twice a day on the lumbar region; and a regimen vegetable and diuretic. The author assures us that the above remedy is equally efficacious in gravel.

Case of Phlegmasia Dolens; with an Account of the Morbid Appearances observed in the Iliac and Femoral Veins. By ROBERT LEE, M.D. Physician-Accoucheur to the British Lying-in Hospital. (From the *Medico-Chirurgical Transactions*, vol. xv. part i.)

This case appears to us to contain more satisfactory evidence of the connexion between phlegmasia dolens and inflammation of the veins than any of those which have been previously published.

Mrs. J., æt. thirty-one, was delivered of her fifth child on the 10th of March, 1827, after a labour of twenty hours' duration, during which she frequently complained of severe pain shooting into her left thigh and leg. This pain entirely subsided subsequently to the labour, and she appeared to reco-

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ver in the most favorable manner until the 14th of March, the fourth day after her confinement. She then began to experience a sense of pain in the left groin and calf of the leg, with numbness in the whole left inferior extremity; but nothing unusual could be perceived in the appearance of the limb, except a slight tumefaction in the situation of the inguinal glands, where pressure occasioned great uneasiness. She had occasional rigors. The tongue was furred, and there was much thirst; bowels open; pulse only eighty. The flow of milk and lochia natural.

March 16th, (the sixth day after parturition,) the pain of the left thigh and leg continued with increased severity, particularly from the groin to the knee, along the inner surface of the limb, where a swelling of a glistening white appearance was observed. The pulse was still eighty, and the general functions were but little deranged.

19th.—The pain had diminished, but the swelling had greatly increased, and extended to the leg and foot, which were both very tense, and did not pit on pressure. There was no discoloration of the skin. The pain of the limb was relieved by placing it in a state of moderate flexion.

21st.—The pain in the groin had abated, and the swelling appeared to decrease.

24th.—The pain of the limb was aggravated, particularly on moving it. The pulse more accelerated; skin hot and moist. She was extremely irritable and desponding.

25th, (the fifteenth day after delivery.)—When I first saw her, the whole extremity was much swollen, the intumescence being greatest in the ham and calf of the leg. The integuments wore a uniform smooth shining appearance, having a cream-like colour, and every where pitting on pressure, but more readily in some situations than in others. The temperature to the touch did not differ from that of the other limb, though she complained of a disagreeable sensation of heat throughout its whole extent, and much pain was experienced in the upper and inner part of the thigh on moving it. Immediately below Poupart's ligament, in the situation of the femoral vein, a thick, hard cord, about the size of the little finger, was distinctly felt. This cord, which rolled under the fingers, and was exquisitely sensible, could be distinctly traced three or four inches down the thigh in the course of the femoral vessels, and great pain was experienced on pressure, as low down as the middle of the thigh in the same direction. The pulsations of the femoral artery were felt in the usual situation below Poupart's ligament: pressure over this vessel excited little or no uneasiness. Pulse ninety and sharp; tongue much furred; thirst urgent; bowels confined. The lochial discharge had nearly disappeared.

Leeches were applied to the left groin and upper and inner part of the thigh: these were followed by cold lotions to the affected parts, and mild cathartics and anodynes were administered internally.

30th.—The acute pain on pressure, and motion of the limb, had subsided, and the extremity was universally œdematous. For two months after this period the limb remained so feeble as to disable her from walking, and continued larger than the other.

Eleven months after the attack the general health of the patient was restored, and she again became pregnant. On the 5th of November, 1828, she was delivered of a stillborn child, and died soon after from uterine hemorrhagy. Permission to examine the body was most reluctantly granted three days

after death, and the dissection was necessarily conducted with the greatest possible despatch, from the danger of interruption on the part of the relatives.

Appearances on dissection.—The whole of the left inferior extremity was considerably larger than the right, but no serous fluid escaped from the incisions made through the integuments, beneath which a thick layer of peculiarly dense, granular, adipose matter was observed. The common external iliac, and femoral veins and arteries enclosed in their sheath, were removed from the body for examination. The common iliac, with its subdivisions, and the upper part of the femoral veins, so resembled a ligamentous cord, that, on opening the sheath, the vessel was not, until dissected out, distinguishable from the cellular substance surrounding it. On laying open the middle portion of the vein, a firm thin layer of ash-coloured lymph was found in some places adhering close to and uniting its sides, and in others clogging it up, but not distending it. On tracing upwards the obliterated vein, that portion which lies above Poupart's ligament was observed to become gradually smaller, so that, in the situation of the common iliac, it was lost in the surrounding cellular membrane, and no traces of its entrance into the vena cava were discernible. The vena cava itself was in its natural state. The entrance of the internal iliac was completely closed, and in the small portion of it which I had an opportunity of examining, the inner surface was coated by an adventitious membrane. The lower end of the removed vein was permeable, but its coats were much more dense than natural, and the inner coat was lined with a strong membrane, which diminished considerably its calibre, and here and there fine bands of the same substance ran from one side of the vessel to the other. The outer coat had formed strong adhesions with the artery and the common sheath. The inguinal glands adhered firmly to the veins, but were otherwise in a healthy condition.

No appearance of recent disease existed, and the density and firmness of the morbid textures evidently showed that the whole was the result of inflammation which had occurred at a remote period.

In the paper from which we have extracted the above interesting case, Dr. LEE relates other instances of phlegmasia dolens, which are interesting in a pathological point of view, and which strongly confirm the opinion he advocates, that this disease, frequently at least, consists in inflammation of the veins.

PRACTICAL MEDICINE.

Partial Palsy cured by Strychnia applied locally.—John Greenhields, aged fifty-six, an habitual drunkard, was admitted into the Glasgow Infirmary on account of a varicose ulcer of the right leg. Ten days before, he suddenly lost the power of the left forearm and hand: the sensation of the parts remained perfect, but he was unable to take hold of any thing, or to extend the wrist and finger joints; had no headach. Being costive, his bowels were freely opened. A blister was then applied to the back of the forearm, and one eighth of a grain of strychnia sprinkled over the vesicated surface. On each successive day the application was increased, by adding the original quantity to that of the preceding day, till it amounted to one grain; after which one fourth of a grain, instead of one eighth, was to be added. From the second week he felt the parts to improve in power daily, with occasional sensation of prickling along the forearm and fingers. No obvious constitutional effect ensued. He was dismissed cured five weeks from the commencement of the treatment.

In the case of another man, with paralysis of the flexor muscles, and diminished sensation of the right leg from the knee downwards, a similar practice was pursued with the same good effect. He was dismissed cured, having been under treatment during six weeks.

At La Pitié, Dr. BALLY is in the habit of treating cases of partial palsy in the above way, and is said to be very successful. In some cases he has made trial of the medicine internally, without benefit.—*Glasgow Med. Journal*.

Intermittent Facial Neuralgia cured by Sulphate of Quinia, used according to the Endermic Method.—Dr. CAUCANAS relates the history of this case in the *Journal Universel des Sciences Médicales* for May.

The subject was a lady, aged thirty years, who, after exposure to cold and moist air, was seized with acute pain of the left ear, which soon extended over the whole left side of the face. Various remedies were put in requisition to allay and remove this malady, which made its attack every evening. Repeated leeching the part, opiates, the carbonate of iron, were all tried in vain. During the administration of this last-mentioned article, the stomach became excessively irritable. The periodicity of the disease seemed to indicate the use of the quinia, which could not, however, be given in the usual manner, on account of the state of the stomach. On a vesicated surface on the arm, therefore, fifteen grains of the sulphate of quinia, mixed with some cerate, were applied. The day was passed tranquilly; no paroxysm during the night, and seven hours of sleep obtained. A similar application on the following day gave a night of entire tranquillity. Two more days of treatment were sufficient for an entire cure.

Polydipsia cured by Camphor.—Dr. ALLERT, of Bromberg, relates an instance of excessive thirst which occurred in a female. Notwithstanding the incredible quantity of cold water drunk by the patient, the thirst was not in the least abated. Her tongue was red, and her feet began to exhibit appearances of œdema. The cause of the affection could not be determined. After the employment of many ineffectual remedies, the patient was finally, speedily, and fully cured by the exhibition of large doses of camphor.—*Journal der Practischen Heilkunde*.

Iodine in Mammary Tumors.—The August Number of the *Revue Médicale* opens with a paper on the above subject, by Dr. BAYLE.

In the first case, of a suppurated tumor of the mamma of long standing, a drachm per day of an ointment into which there entered six grains of the hydriodate of potass was prescribed, and the patient took also fifteen drops of the tincture of iodine three times a day. At the expiration of fifteen days there was an evident amelioration. An uneasy dragging pain of the stomach indicated the necessity of desisting from the use of the tincture. The quantity of the hydriodate was progressively augmented, so that finally an ounce of the ointment contained two drachms of the salt. The tincture was prescribed, and occasionally discontinued, according to its toleration by the stomach. Applied by friction to the tumor itself, the tincture caused, three or four times, a general inflammation of the breast, requiring the temporary suspension of its use, and a recourse to emollients; but it was observable that, after each of these accidents, there was a more decided progress of resolution. This treatment, persevered in for three months and a half, was produc-

tive of entire relief and a disappearance of all glandular engorgement. The general health was at the same time much improved, and the menses, which had been suspended for eighteen months, were restored.

The second case was of an indolent tumor of the breast, of a scrofulous appearance, of two years' duration, and which, rebellious to the common methods of treatment of scrofula, was cured by the hydriodate of potass. A scruple of the ointment of the salt, introduced under the axilla every night for six weeks, sufficed for this purpose.

The third case was of eighteen years' duration. It was marked by an induration of two inches extent round the nipple, the consequence of a wound of that part, and accompanied by flying pains. For three months before beginning with the iodine, there had been an increase of the tumor by a fall: it was hard, bilobular, and the seat of frequent and lancinating pains. A resolution of the indurated gland was accomplished by means of frictions of the hydriodate of potass, and the tincture of the iodine internally.

In this case it was found that the excessive sensibility of the stomach, by which the patient was unable to retain a common purge, subsided under the influence of the vinous tincture of opium. She was thus enabled to take, without interruption, the tincture of iodine, six drops three times a day, gradually increasing the dose. The omission of the laudanum for a single day caused the stomach immediately to reject the iodine.

In the fourth case, distinguished by a cancerous and fetid ulcer of the breast, with cachexia, there had been an amelioration of the symptoms produced by Fowler's solution, and a return of all the bad symptoms by the use of compression.

The administration of the iodine by tincture internally, and by ointment of the hydriodate of potass externally, was followed by a rapid amendment, and nearly complete cicatrization of the ulcer. The general health was also much improved. Finally, however, there was a relapse, followed by death.

On the Use of Iodine in several Diseases. By WM. M. FARNESTOCK, M.D.

CASE I.—Mary, ætat. twenty-eight, a sister of the Antietam nunnery of Franklin county in this state, discovered the enlargement of the thyroid gland six years since, which continued to enlarge until it had obtained the size of a walnut, and was hard and painful. The mild tincture was prescribed in the ordinary doses, and the *Liquor Potassæ Hydriodatis* ordered to be used externally. The tumor at present (having used the medicine seven weeks,) is scarcely perceptible, soft, and free of pain or any uneasy sensation.

We have now five other cases under an equally successful treatment.

CASE II.—Perplexed with a case obscure in its nature, and very concealed in its operations, which appeared to be a periodical congestion of the whole glandular system, associated with derangement of the catamenia, in a young lady of nineteen, and recollecting the encomiums of Coindet and Coster* on the iodine as an emmenagogue, and its usefulness in scrofulous affections, I resorted to it with the most signal advantage. About the usual period of menstruating, the superficial glands became enlarged and painful, sometimes highly inflamed, and occasionally producing imperfect suppuration, accompanied by nausea, indigestion, and eructations, which evidenced a disordered state of the mesenteric system. The discharge from the uterus was but

* *Archives Générales de Médecine.*

small, and attended by much pain, and frequently scarcely any show at all. The tincture was administered in the syrup of sarsaparilla, and was continued three months, with the happiest effects, and seemingly with permanent benefit. There are no cases which come under the care of the physician more complicated and interesting than the derangements of the uterine system, or for the relief of which the young aspirant gains more of the applause and confidence of the influential part of the community. It therefore affords the most fertile field for anxious but cautious and prudent experiment. I have also the pleasure of adding my testimony to that of M. GIMELZ,* of its usefulness in chronic leucorrhœa, from a case now under treatment, but not sufficiently recovered to report as perfectly relieved.

CASE III.—Another formidable disease, which has combated every remedy and defied the surgeon's knife, may be found to yield to this very active agent, fungus hæmatodes. An incipient case came under our observation, in which the limb had not yet attained very great enlargement, but was knotted, and bore all the characteristics of the genuine fungus hæmatodes: it yielded most effectually to the tincture and unguentum.

We have never found any of the bad effects arise from its use as exhibited in the lamentable picture of the English author upon this substance. A little sickness of the stomach occurred in the first case, which is to be attributed to the strength of Magendie's tincture; and a little vertigo attended the second, probably from increasing the dose too rapidly; both of which were relieved by omitting the remedy for one day. But, with the mild tincture, we have never witnessed any unpleasant symptom; and it may be proper to add, that Decarro, Coindet, Erlinger, Formey, and a host of others, who have experimented most extensively, never complained of any injurious qualities. It is well, however, to observe, that the *burnt sponge*, which has been used as the same, has not precisely the same operation, and contains some deleterious properties, which have been particularly remarked by Hufeland,† as being noxious to persons disposed to phthisis and spitting of blood; and it is doubted by Foderé and M. Hetch whether it contains any iodine whatever. Much may depend on the quality of the tinctures, as it has been ascertained that, when suffered to stand any time, it deposits crystals, and may form the ioduretted hydriodic acid: therefore it should always be prepared for immediate use, and in small quantities. These precautions may obviate the evils complained of so bitterly; to which may be added, premising its exhibition by evacuating the alimentary canal, and occasionally giving a gentle cathartic, as calcined magnesia, should any untoward symptoms occur.—*American Journal of Med. Sciences.*

Cancer of the Uterus cured by Injections of Hydrocyanic Acid.—A case of this nature was reported by Dr. BRUNI to the Medico-Physical Society of Florence, at one of its sittings in March. The injections were made four times a day. The acid was prepared agreeably to the process of Scheele, and four denarii were mixed with four pints of barley water. Cicuta and aloes were administered internally. During the first few days, the injections caused sharp cutting pains of the severest kind; but the patient having passed by the vulva fragments of a membranous and fleshy substance, her pains be-

* Revue Médicale.

† Hufeland and Osann's *Journal der Pract. Heilkunde*, Feb. 1828.

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came from that time less severe: she regained her strength and flesh to such a degree, that in six months there was not a vestige of disease of the uterus. The menses returned at regular intervals.

SURGERY.

Cancer of the Penis from Phymosis.—M. Roux lately observed, at La Charité, that phymosis is one of the most frequent causes of cancer of the penis. All the patients upon whom he had operated for cancer of that organ had either congenital or accidental phymosis. When the prepuce is in this state, it almost always becomes inflamed and hardened, and sometimes cancerous. Independent of the sebaceous matter that collects around the neck of the glans, and which frequently produces ulceration, in sexual intercourse the skin of the prepuce is distended and often torn; and, even if cicatrization does take place, the part is again torn. M. Roux also referred to an English surgeon of high authority, who is of the same opinion. In twelve amputations of the penis which he had performed, nine had been rendered necessary by cancer of the prepuce and glans, the consequence of phymosis. M. R., therefore, recommends that those persons who have phymosis should be relieved as soon as possible.

Seton successfully applied in disunited Fracture. By Dr. DOHLDOFF. (*La Lancette Française.*)

Mr. AMESBURY says, that, although he has heard of many cases of non-union treated by the employment of setons, he is not aware that there are more than three treated in this country, where its operation appears to have brought about consolidation of the bone.* The following case is, therefore, interesting.

J. R., twenty-four years old, of good constitution, broke his leg in January 1826, and was attended for ten weeks by a country surgeon. At this time the fracture was not united, and the ends of the bone were not in apposition. Many plans of treatment were tried without success, and in September he was placed under the care of Dr. DOHLDOFF. The left thigh was not lessened in bulk, but it was rather shorter than the right. When the patient stood up, the limb was turned inwards. The fracture was about the middle of the bone. The broken extremities were not enlarged, and were perfectly free from any adhesion; for the lower part of the limb could be moved in any direction without difficulty or pain. General health good. The application of a seton between the fractured extremities of the bone was determined upon. The operation was performed on October 3d. The inflammation which followed was so severe that it was necessary to withdraw the seton eight days after. Free suppuration took place, and several fistulous abscesses formed between the muscles. But little hopes of benefit from the operation were now entertained, and the life of the patient was not considered altogether safe. At the expiration of a month, however, the fracture began to consolidate. The wound made for the introduction of the seton, and the abscesses, healed. Towards the end of December very solid callus was formed; and, to prevent excessive ossific deposition, which took place too rapidly, pressure was applied. At the beginning of May the length of the two legs was equal, and the patient complained of nothing more than very slight weakness in the left limb.

* Observations on the Nature and Treatment of Fractures, 1828, p. 225.

Aneurism of the Brachial Artery cured by Pressure.—M. TETU, a regimental surgeon, details the particulars of a case of false aneurism at the bend of the arm, cured by pressure, which method he prefers to the ligature now so universally recommended. His patient in twenty-one days was cured; the tumor having disappeared, and the artery being obliterated for four inches. This is the second case in which he succeeded: the first patient recovered in sixteen days. His mode of compression is by a bandage methodically applied from the hand, by a graduated compress over the tumor and in course of the artery, and covered by a splint two inches wide and fifteen in length. Another splint, four inches wide and also fifteen long, was applied on the opposite side of the arm. Both were secured by a bandage, so as partially to interrupt the blood in the injured artery. In a few days the pressure was increased, so as to arrest the passage of blood in the vessel: the circulation, however, continued in the anastomosing vessels, owing to the arrangement of the splints, by which they were protected from compression.—*Journal Universelle*.

M. CIVIALE's Operation of breaking down the Stone in the Bladder. (Extract from LA ROCHE's "Account of Surgical Operations in Paris," *North American Med. and Surg. Journal*.)

The cases in which I saw M. CIVIALE operate were all very interesting, and the results reflect great credit on him. The first was that of a man on whom M. DUPUYTREN had attempted the same method, but failed. The patient, being thought too much enfeebled by disease to bear the operation of lithotomy, was sent to the country to recruit a little strength. After returning to the city, instead of going once more to the Hôtel Dieu, he entered the Pitié, was sounded by M. LISFRANC, experienced an inflammation of his testicles, and, after recovering from this, was placed by M. L. in charge of M. Civiale. The first operation by this surgeon was performed at the hospital, in presence of a large class of students and of several surgeons, both foreign and native. M. C. experienced none of the difficulty which M. Dupuytren had done; he introduced a larger instrument into the bladder, seized the stone, and ground it. All this was done in about as little time as I employ in stating it. The stone proved to be very brittle, several fragments were destroyed, and nearly a teaspoonful of sand was passed with the urine immediately after the operation, and during the course of the day. As the man's constitution is very feeble, (in fact, as he is a bad subject for any operation, however trifling,) he was soon sent to bed. Experiencing no unpleasant effects from this first trial, he very gladly submitted to a second a few days after. The stone was again bored, and several other fragments destroyed. Since then, his bladder having experienced a slight degree of irritation, and, after this had subsided, one of his testicles having swelled, the operation has not been repeated. It is thought that a few days will suffice to set every thing to rights, when a third trial will be made. I have little doubt that in a few weeks this man will be completely rid of his stone.*

I attended at M. C.'s house on several occasions, and saw him there perform his operation on two or three individuals. One of the individuals, a man of about sixty-five or seventy years of age, had submitted twice to the

* One of the students informed me today (Sept. 8.) that the man was quite well, and that the operation would be repeated in a few days.

operation of lithotomy: once over the pubis, and the other time by the perineum. The consequence is that his bladder had two cicatrices, one above and the other below, which rendered it very irregular. Owing to this, M. C. experiences, at each repetition of his operation, considerable difficulty in finding the stones, and particularly the small fragments, and the patient suffers a good deal more than others generally do. Yet the former always succeeds; and the latter gets up laughing and joking, dresses himself, and walks off as if nothing was the matter with him, always stating that he will soon return to have the business completed, and that he is sorry he did not know of this method before; for, had he done so, he would not have submitted to the others. Can the advantage of this method be indicated more satisfactorily than by such facts?*

Another patient, also far advanced in years, has the opening of the urethra far below the head of the penis. This occasioned some difficulty in introducing the instruments. But M. C. finally succeeded; seized the stone, and with more than usual difficulty ground a good portion of it; for it proved as hard as marble. This man also walked home very quietly, and experienced comparatively little pain, except on the first introduction of the instruments. Since writing the above I have assisted, in company with our friends, Dr. BROWN and Mr. RALSTON, at the second operation on this patient. He bore it much better than on the former occasion, complained of less pain, and walked off in good spirits, blessing M. Civiale with much warmth. A few minutes after I met him on the Boulevard. He told me that he had no pain, which I could easily perceive, as he walked as erect, and with as cheerful a countenance, as if nothing had occurred. Mr. Ralston, who is no medical man, and consequently must be admitted to be a disinterested and impartial judge, will bear testimony of the ease with which the operation is performed, at least by M. Civiale.

In terminating what I have to say of M. Civiale and his instruments, I must not omit mentioning that, whilst at Pavia, my friend, Professor RIGONI, informed me that the celebrated SCARPA had formerly publicly expressed a very unfavorable opinion of the operation, an opinion formed merely from examining a set of instruments made at Milan. In the spring of 1827, however, M. Civiale, who had gone to Genoa on business, crossed over to Pavia for the express purpose of seeing Scarpa. No sooner had this remarkable man seen M. Civiale's instruments, and been shown the mechanism of the operator, than he perceived that the unfavorable opinion he had formed of this method was attributable to the imperfection of the Milanese instruments above alluded to, and not to the method itself; and candidly and honourably retracted his former judgment. Scarpa has not himself written any thing relatively to this change of sentiment; but requested Professor Rigoni to do so for him, in a letter to Professor Pazzini, of Lucca. This letter is published in one of the Numbers of Omodei's Annals, and ought to be read and meditated upon by every inexperienced opponent of the *grinding* method. They will, I hope,

* From comparative tables made at Paris, it appears that one out of five patients die from the operation of lithotomy. In 150 cases in which Civiale's method has been employed, not more than five or six have ended fatally; and it must be observed that most of these occurred in the practice of surgeons who were inexperienced in the use of the instruments for grinding and breaking the stone.

allow that Scarpa's judgment in surgical matters is of as much weight as theirs; and, assuredly, as if he thinks himself authorised, after examining the thing for himself, and after mature reflection, to express a decidedly favorable opinion relatively to M. Civiale's instruments, I may be allowed to think that they will not be disgraced by looking a little into the matter; or, at least, by expressing themselves in a less decided tone against a surgical point, of which they have not the least knowledge, and on which, consequently, they are not able to pronounce.—*North American Med. and Surg. Journal.*

MATERIA MEDICA.

Ergot of Rye.—In the *Bulletin des Sciences Médicales* for July, we find a notice of a work published last year by M. COURHAUT, health-officer at Chalons, and medical practitioner in the departments of Saône-et-Loire and of Allier, which contains some interesting particulars respecting the effects of ergotic rye, when used in quantity as aliment by the inhabitants. During what the author calls an *ergotic year*, when rye in which ergot predominates is eaten, the individuals so using it suffer from gangrene of the limbs. There is at first a tingling sensation in the part, which assumes a roseate line; the pulse is gradually weaker, and finally ceases to beat; then follows coldness, swelling, violaceous colour, sphacelus, and a separation of the limb or a portion of it.

Ergotic bread used by nurses for four or five days dries up the secretion of milk. It causes abortion after ten or fifteen days' use of it.

These facts are the more valuable as the result of extensive observation, and not pressed in support of any particular hypothesis. It is well to remark that the largest administration of the ergot as a medicine cannot equal what is taken in the ergotic bread, and in which the baneful agent is nearly an eighth part of the whole mass. By such an estimate, one to two ounces of ergot must be ingested daily.

The chief preventive and curative agent in the hands of M. Courhaut, after abstinence from the ergotic bread, is ammonia, rubbed on the affected parts, and taken internally with bark. He asserts that he has had 300 persons variously affected with ergotism under his care, and has only lost one.—*Ibid.*

MEDICAL JURISPRUDENCE.

Asphyxia.—M. LEROY, in a memoir presented to the Royal Academy of Medicine in 1826, had pointed out the dangerous consequences of pulmonary insufflation; a means so commonly had recourse to in order to restore vitality to drowned persons. He showed that it was sufficient for air to be driven once with force into the chest of rabbits and sheep to produce in them instant death. In a new work, M. Leroy, by still more numerous and diversified experiments, endeavours to prove that pulmonary insufflation, so far from being entitled to the first place in the treatment of asphyxia, ought only to be practised in particular cases, and with great circumspection.

The principal facts resulting from the experiments of M. Leroy are the following:

The dangers of insufflation are in the inverse ratio of the resistance and density of the lungs of the animal. Thus the specific gravity of the lungs of a dog is double that of a sheep, and accordingly insufflation, almost invariably fatal to the latter, only produces in the dog a great difficulty of respiration,

and rarely death. The density of the lungs of the new-born child is greater than that of the adult; and hence we may infer that pulmonary insufflation would be less dangerous to the infant, and such, according to the experiments of M. Leroy, is the fact.

Death from sudden insufflation depends on various disorders. There is almost always a rupture of the pulmonary cells, the air is effused into the cavity of the chest, compresses the lungs, which are shrunk, and prevents respiration. When death after sudden insufflation is not accompanied by effusion in the chest, air is found in the blood-vessels, and ecchymosis on the surface of the lungs.

M. Leroy, in accordance with the opinion of DESERANGES, thinks that asphyxia by submersion is the direct effect of syncope, and that the greater number of drowned persons recalled to life after a certain interval had been seized with fainting at the moment of immersion, so that the circulation was stopped at the same time with respiration, and dark blood did not flow into the arteries. That the inference from this belief was not acted on, is a matter of astonishment to M. Leroy. The treatment for syncope is that which ought to be put in use in cases of asphyxia from submersion. Galvanism over the diaphragm by means of fine needles, has been proposed by the author; but this demands some time and preparation, and can only be done by a physician. M. Leroy has, since he proposed this plan, tried with advantage the practice of simple pressure on the thorax and abdomen: the ribs and diaphragm thrown back by this manœuvre, return on themselves in virtue of their elasticity, and cause an enlargement of the chest, and consequently the entrance of air, which may be expelled by renewed pressure. These movements make an artificial respiration.—*Ibid.*

NATURAL HISTORY.

Vegetation in Air at different Pressures.—M. DOBEREINER took two equal glass vessels of 320 cubic inches capacity each: in these were put portions of the same earth in which two portions of barley had been sown, and moistened to the same degree. The air was now exhausted from one vessel until the pressure equalled fourteen inches of mercury, and in the other it was condensed until the pressure equalled fifty-six inches. Germination took place in equal times, and the leaflets were equally green; but, at the end of fifteen days, the shoots in the rarefied air were only six inches long, but in the condensed air from nine to ten inches. The former were expanded and soft, the latter rolled round the stem and solid: the former were wet on their surface, and especially at the extremities; the latter nearly dry. "I am disposed (says M. Dobereiner,) to believe that the diminution in the size of plants, as they rise on mountains into higher regions, depends more on the diminution of pressure than of heat." The phenomenon of drops of water on the leaves in rarefied air calls to mind the relation of a young Englishman, who, whilst passing through Spanish America as a prisoner, remarked that "on the highest mountains of the country the trees continually transpired a quantity of water, even in the driest weather, the water falling sometimes like rain." *Bib. Universelle.*

Native Sulphuric Acid.—Professor EATON has described the natural occurrence of sulphuric acid in large quantities, both in a diluted and a concentrated state, in the town of Byron, Genessee county, ten miles south of the

Erie canal. The place has been known in the vicinity, for seventeen years, by the name of the *sour springs*. The place consists of a hillock 230 feet long and 100 broad, elevated about five feet above the surrounding plain: its greatest extent is north and south; it consists of an ash-coloured alluvion, containing an immense quantity of exceedingly minute grains of iron pyrites. It is mostly covered with a coat of charred vegetable matter, four or five inches thick, and black as charcoal; the same kind of matter extends on all sides, from the base of the hillock over the plain. Its charred side is caused wholly by the sulphuric acid. Several holes have been dug in the hill, which now contain turbid dilute sulphuric acid; also the depressions on the meadow ground around it. The strength of the acid increases in a time of drought. When Professor Eaton examined it, much rain had recently fallen, and the acid was very dilute in most places, but it was strong in some, and appeared to be quite concentrated and nearly dry in the charred vegetable coat. In this state it was diffused through the whole piece of ground, which presented the charred appearance to the depth of twelve or fifteen inches, and in some places three or four feet. But it was every where the strongest at the surface.

In wet spring seasons it appeared that adders-tongue, and some other plants, flowered on this hillock sooner than on the adjoining grounds; but, as soon as the spring rains began to decline, then the vegetables withered away, and appeared as if scorched.

About two miles east of this place is another sulphuric acid spring, still more remarkable in one respect. The quantity of water from the spring is in sufficient quantity to turn a light grist mill, and yet there is so much sulphuric acid present in it, that the stream will constantly redden violets, and its water coagulate milk. Several other sour springs were mentioned as existing in the neighbourhood.

It is supposed that the sulphuric acid is produced in some way by the decomposition of the pyrites in the soil.—*Silliman's Journal*.

Spontaneous Human Combustion.—That cases happen in which the human being, even when alive, undergoes a sudden destruction, as if by a consuming process, cannot be doubted; and these are now so numerous as to have induced M. JULIA DE FONTENELLE to read a paper on the subject to the Academy of Sciences of Paris. Fifteen instances are particularly described by him, from the details of which the following general results are obtained:

1. Generally those who have died by spontaneous combustion have indulged in excess of alcoholic liquors.
2. The combustion is almost always general, but in some cases may be partial.
3. It is rare amongst men: the women have, in almost every case, been aged.
4. The body and the viscera have always been burnt; whilst the feet, hands, and top of the head, have almost always been preserved.
5. Although it is known by experience that a very large quantity of wood is required to burn a corpse, this particular kind of incineration occurs without inflaming the most combustible substances of an ordinary kind near it.
6. It has not been shown in any case that the presence of an inflamed body is necessary to commence this kind of combustion.
7. Water, instead of extinguishing the flame, appears to give it more activity; and, when the flame has disappeared, the combustion proceeds within.
8. They occur more frequently in winter than in summer.

9. The cure of general combustion has never been effected, only of partial ones.

10. Those to whom it has happened have experienced a sensation of strong internal heat.

11. It is suddenly developed, and consumes the body in a few hours.

12. Those parts which are not reached by the fire are affected by sphacel.

13. A putrid degeneration ensues, which causes gangrene.

14. The residue of this combustion is composed of greasy cinders and an unctuous fatty matter, both having a fetid odour, which is perceived at a great distance.

These results show the inapplicability of the explanations which have sometimes been given of this effect. Considering how much fuel is required to consume a corpse, it is impossible to suppose that, in these cases, the combustion is occasioned by the inflammable nature of alcohol, or of hydrogen, which may be supposed to be evolved; and, again, the ordinary products of the combustion of animal matter is a very spongy, black, shining charcoal, fetid, and incinerating only at a very high temperature; whilst, in spontaneous human combustion, the temperature produced is so low as not to inflame neighbouring bodies.

M. Julia de Fontenelle, therefore, considers this case of combustion to depend upon a very advanced and putrid degeneration of the system, which suddenly produces very combustible substances, at the expense of the muscular fibre, &c.; and, these inflaming spontaneously, (by means of the opposite electricities, &c.) cause the resulting effect. This degeneration is considered as presenting a perfect analogy with vegetable putrid fermentation and putrefaction. The putrefaction of vegetables is known to occasion the development of so much heat as sometimes to cause their inflammation.

These human combustions do not depend upon the combination of the oxygen of the atmosphere: because, 1st, there is not sufficient heat evolved; 2d, there is not the production of a charcoal requiring a high heat for its incineration; 3d, there are no ammoniacal products formed. The effects appear to depend altogether upon a new arrangement of the elements previously existing in the human body.—*Quarterly Journal of Science*, from the *Bull. Univ.*

INTELLIGENCE.

MONTHLY REPORT OF DISEASES.

CHOLERA has been very prevalent during the last three weeks, and in several instances, we understand, it has proved fatal. The cases which have fallen under our immediate observation have been mild, and easily controlled by medicine. Bilious diarrhœa, unaccompanied by any sickness, has also been general.

For the following account of a disease in some respects resembling cholera, which has very recently attacked many individuals in one family at Clapham, we are chiefly indebted to the Medical Gazette.

On Thursday, Aug. 14, a son of Mr. Day, a schoolmaster at Clapham, aged three years, having been previously in good health, was seized with violent vomiting and purging about six o'clock in the morning. At twelve convulsions

came on, and he continued in them until seven o'clock on the following morning, when he expired.

All the other boys, thirty in number, between four and fourteen years of age, remained well the next day. This being Saturday, several of the pupils went home, leaving in the school twenty-two boys. Of these, twenty were attacked on Sunday morning with vomiting and purging of a very alarming character, attended with a degree of prostration which threatened many of them with immediate death. The appearance of the matters vomited was somewhat various in different individuals. In some instances it was tinged with green bile, and was of a subacid smell; but in the great majority of cases it was colourless and inodorous. The stools also varied in appearance, but they were for the most part pale, consisting of mucus and muco-purulent matter, slightly streaked with scarlet blood. In different boys, also, the pulse varied very much. In the early stages of collapse it was very frequent, but so feeble as to be scarcely perceptible. The skin was in most instances cold and clammy throughout. In a few cases it was for a short time hot, and the face was in these occasionally flushed. There was a low delirium in some advanced cases, with dilated pupils, but the sensorium was not affected in the greater number of them. There was no pain in the stomach or bowels, beyond the griping which preceded the stools. In a few of the cases there was slight tenderness, and some tension of the abdomen. Altogether, indeed, the disease came on very much like the tropical cholera, with a short obscure stage of excitement, immediately followed by a state of extreme collapse, which, under the use of stimulants, was succeeded, in the milder cases, by warmth, gentle moisture, and general reaction. In most of the cases there was convulsive action of the muscles; but it was rather a twitch or subultus than cramp, and it was confined to the upper extremities.

On Sunday afternoon, Dr. SPURGIN, and Messrs. ANGUS and SAUNDERS, of Clapham, requested the co-operation of Dr. P. M. LATHAM, Dr. CHAMBERS, and Mr. PEARSON. Another of Mr. Day's sons was now evidently sinking; and a third, as well as several of the pupils, were in a state of dangerous collapse; others, again, although not out of peril, were rallying.

Every inquiry was made to ascertain if the children had eaten any thing which was likely to produce such symptoms; but upon this point no satisfactory information was obtained.

The following appearances were detected in the body of the child who was the first victim of the disease. On laying open the abdomen, the viscera appeared perfectly healthy, as far as external appearances went. Liver was healthy in size and colour. Gall-bladder somewhat distended with healthy bile. Peritoneum throughout pale, transparent, and perfectly free from any appearance of thickening. On laying open the small intestines, however, it was observed that the peyerian plexuses of mucous glands were enlarged in patches throughout the ileum, raising internally, without destroying the mucous membrane covering them, into condylomatous elevations. Lower down in the small intestines, a few of the glandulæ solitariae were similarly affected; and, in the ascending colon and transverse arch, these latter glands seemed almost universally diseased, giving an appearance of pustulation, or rather tuberculation, to the whole interior of the bowel; the interstices of the tubercles here, as well as in the small intestine, being entirely free from vascularity. The mesenteric and mesocolic absorbent glands, in the neighbourhood of the parts most diseased, were congested and enlarged. The stomach thoracic viscera, and brain, were quite healthy.

The treatment which had been adopted, and which it was determined still to pursue, was to give stimulants, with opiates, to those who were sinking from exhaustion and spasm. In the few instances in which the head seemed, in the course of the reaction, to be affected, leeches were applied to the temples. Mustard poultices were applied to the abdomen. Clysters were given, and afterwards full doses of calomel and opium.

Early on Monday, another of Mr. Day's sons, æt. four years, died twenty-three hours after being attacked. His body was carefully examined a few hours after death, and exhibited the following appearances. The abdominal viscera, when first exposed, appeared perfectly healthy. The examination of the bowels was commenced with the ileum, in which the mucous glands, both aggregate and solitary, were found generally enlarged, and the mucous membrane covering them in many places ulcerated. The interior of the cæcum, colon, and rectum, however, exhibited no appearance of diseased mucous glands, although the membrane throughout was uniformly congested, pulpy, and very easily separable from the subjacent tissue. The examination was now pursued upwards from the ileum. The jejunum, at the lower part, was less diseased than the ileum, and, as it approached the duodenum, was more and more healthy. The duodenum, however, on being laid open, exhibited a pustulated appearance, depending on enlarged follicles, very similar to that of the colon in the former case. The mesenteric and mesocolic glands belonging to the diseased portions of bowel were enlarged, and more vascular than natural. The liver was quite healthy. The gall-bladder contained more than an ounce of perfectly healthy bile. It was remarkable that the contents of the bowels were nearly colourless, and had no feculent, or indeed any other peculiar odour. The stomach was perfectly healthy. Thoracic viscera also healthy. The ventricles of the brain were distended with about three ounces of serum, and the sinuses were somewhat more charged than usual with dark-coloured blood. The brain and its appendages were not otherwise diseased.

Most of the boys were removed by their friends on the 17th, many of them in a very alarming condition; but they all recovered in the course of the week.

It was afterwards ascertained that a very foul drain, or cesspool, the situation of which was not previously known, behind the house, was accidentally opened a day or two before the disease occurred. The contents of this receptacle were taken out, and thrown into a garden adjoining the play-ground, and separated from it only by a low and slight open paling. Whether the sulphureted hydrogen itself was the agent in producing this pestilence, or whether that gas was merely the vehicle of some more subtle miasma, is doubtful; but that the boys were freely exposed to this effluvia is quite certain; and that almost every one of those who had been in the play-ground was attacked by this disease, is also generally undoubted. It is remarkable that the younger boys were most severely affected, and that a man, who actually fell into the cesspool, escaped altogether.

University of London.—The medical classes commence on the 1st of October; the general classes on the 2d of November.

MONTHLY LIST OF MEDICAL BOOKS.

An Essay on the Deaf and Dumb, showing the Necessity of Medical Treatment in early Infancy; with Observations on Congenital Deafness. By J. H. CURTIS, Esq. &c.—8vo. pp. 211. Longman, London, 1829.

An Introduction to Systematical and Physiological Botany. Illustrated with explanatory Engravings. By THOMAS CASTLE, F.L.S. Surgeon.—12mo. pp. 284. Cox, London, 1829.

The intention of the present work is to give the student a comprehensive outline of the different branches of botanical science. This purpose Mr. Castle has very neatly and ably executed. A better introduction to the study of botany cannot be consulted.

Medical Botany, No. XXXII. for August 1829. By JOHN STEPHENSON, M.D. F.L.S. &c. and J. M. CHURCHILL, F.L.S. &c.—Published by Tilt, Fleet street.

In this Number of this highly esteemed work, there are excellent engravings and practical descriptions of the qualities, medical properties, uses, and officinal preparations, of the *Laurus Sassafras*, the *Laurus Cinnamomum*, the *Centaurea Benedicta*, and the *Pistacia Terebinthus*.

Pathological Observations. Part II. On Continued Fever, Ague, Tic Doloureux, Measles, Smallpox, and Dropsy; illustrated by Cases. With a preliminary Dissertation on the Institutes of Medicine, and an Appendix on the Origin, Prevention, and Cure of Organic Diseases. By WM. STOKER, M.D. &c.—8vo. pp. 267. Dublin, 1829.

METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

July	Rain gauge.	Moon	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 a.m.	2 p.m.	10 p.m.
20			61	70	50	29.90	29.99	48	48	W	W	Fine	Fine	Fine
21			63	73	59	30.10	30.10	48	47	W	W	—	—	—
22			68	73	61	.06	.04	47	51	W	W	Cloudy	—	—
23			65	73	59	.04	29.96	51	51	W	W	Cloudy	—	—
24			68	73	62	29.84	.75	51	57	SW	S	Fine	—	Cloudy
25			66	71	64	.73	.79	57	56	SSE	SSW	Cloudy	—	Fine
26			68	73	49	.86	.91	55	54	SW	SSW	Fine	Show'ry	—
27			61	63	53	.96	.97	54	50	NNE	NNE	—	Fine	—
28			60	62	54	.93	.89	48	48	NNE	SW	—	—	—
29			61	68	52	.55	.58	50	52	WSW	SW	Rain	—	Cloudy
30			59	63	52	.63	.66	52	57	ESE	NE	Fine	Fine	Cloudy
31	.54		61	65	52	.82	30.00	55	53	N	N	—	—	Fine
Aug. 1			61	66	55	30.08	.03	53	54	N	N	—	—	—
2			61	71	53	30.00	30.00	54	55	NW	NW	—	—	—
3			58	64	52	29.97	29.78	55	55	WSW	WSW	—	Rain	Rain
4			59	65	53	.68	.63	52	52	W	W	Cloudy	Cloudy	Cloudy
5			60	66	59	.77	.92	51	54	NW	NNW	Cloudy	Fine	Fine
6			65	69	50	.94	.34	54	53	NNW	NW	Fine	—	—
7			66	74	59	.02	.01	51	50	WSW	SW	Cloudy	—	—
8			64	72	57	29.95	.86	53	53	SWva.	SWva.	—	—	Cloudy
9			59	68	59	.78	.81	57	52	WSW	W	Rain	—	Fine
10			65	68	59	.96	30.01	50	51	W	SW	Fine	Cloudy	Fine
11	.105		68	72	61	.98	.88	51	51	SW	SW	—	Fine	—
12			70	74	60	.64	.55	50	53	SW	SSW	Cloudy	—	Cloudy
13			63	65	53	.41	.34	55	56	S	NNE	Rain	Rain	Show'ry
14			55	58	50	.43	.57	57	60	NNW	NNW	Cloudy	Rain	Rain
15			57	62	47	.84	.96	58	55	NW	SW	Fine	Cloudy	Fine
16	.75		56	65	55	30.03	.97	52	55	W	SW	Fine	Fine	—
17			57	64	57	29.67	.54	55	56	SSW	SW	Rain	—	Cloudy
18			62	64	54	.40	.33	50	56	Wvar.	SW	Fine	Show'ry	Fine
19	.50													

The quantity of Rain fallen in the month of July, was 8 inches and 44-100ths.

NOTICES.

Communications have been received from Mr. PEREIRA, Mr. CHENEVIX, &c.

ERRATUM in the last Number, p. 185.—The name of the gentleman who gained the *Materia Medica* Prize, and other honours, at the University of London, is Mr. Robert Garner, of the Staffordshire Potteries, and not "Gardner," as it was misprinted.

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THE LONDON
Medical and Physical Journal.

NO 368, VOL. LXII.]

OCTOBER, 1829.

[NO 40, *New Series*.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long, but an invaluable series.—RUSH.

ORIGINAL PAPERS, AND CASES,
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER
AUTHENTIC SOURCES.

LITHOTRITY.

Historical Sketch of Lithotritry. By W. B. COSTELLO, Esq. late
Assistant to the Inventor, Dr. CIVIALE.*

WHEN a great and useful discovery has been effected, and when its application begins to astonish and benefit the world, the parts which chance or industry has had in bringing it to maturity are not very easy to be precisely assigned; nor should this inquiry delay us. Lithotritry, or the method of drilling and crushing calculi in the bladder, like many other important discoveries, is an unexpected result, obtained or arrived at by a bold and acute mind, after much labour and by an indirect course.

In all inquiries which have for their object some great practical benefit, the *point de depart* is that which attracts the attention of the philosopher. How immensely has chemistry benefited by the search after the philosopher's stone! The progress of inquiry with regard to lithotritry is perfectly analogous. A pursuit equally chimerical, the dissolution of stone in the bladder, has led to this important improvement in the treatment of calculous disease; and it is indeed remarkable, amongst the numerous means employed for the cure of stone, that the most efficacious and the most safe,

* The plates referred to in various passages of this communication will be given in our next Number, with a second article from Mr. COSTELLO.—

EDITORS.

namely, those by which the foreign body may be comminuted in the bladder, and which in ancient times had all but fallen within the domain of science, should have been deemed too unprofitable for direct research; whilst the idea of dissolving those concretions by means of reagents had been adopted by all, and pursued so far, till it has led us, almost without our knowledge, to the employment of mechanical agents; or, in other words, to the invention of lithotrity. Thus a means, which in the outset was merely considered as an accessory part of the treatment by reagents, has turned out to be the most simple, efficacious, and certain of all those hitherto proposed, and, by its results, entitled to rank amongst the most brilliant achievements of surgery.

The ardor with which inquiry for a better therapeutical agent in the treatment of calculous disease has been conducted, reflects high honour on those distinguished individuals who, in this and the last century, have so elaborately investigated this subject. For a moment, every thing was hoped for from modern chemistry. Those hopes, however, were never realized; the only result being a correct analysis of the concretions obtained by cutting, or after death, from the bladder or kidneys, &c. of the individuals affected. Meanwhile many eminent contemporaries were continually reducing to practice their useful meditations on the only alternative left, lithotomy, until the instruments and operative process may be considered as having attained their utmost degree of perfection.

But it is not in this century, or the last only, that the appeal of suffering humanity had been so strongly urged on the enlightened philanthropy of medical science, for the discovery of means to alleviate the protracted and grievous torments occasioned by the presence of calculus in the bladder. The liability to it suspended vaguely, and as it were *in terrorem*, over every human being, however favored by nature; and some philosophers instituted inquiries from their love of science, while others, who had felt the attacks of this internal enemy, consumed their lives in researches which, notwithstanding the strength of their desires, they were not fortunate enough to bring to a successful issue. The anxiety felt on this subject was general, and pervaded all times. A keen spirit of inquiry, traversing the most remarkable epochs in the history of the healing art, and led on by the desire of improving this very interesting branch of it, had left, it is true, thinly scattered within the boundaries of science, those rudiments which, carefully collected,

combined, and rendered perfect by the genius of one man, present themselves to our view, not indeed as the development of new and original ideas, but as a complete system, confirmatory of the speculations of philosophers, ancient and modern, establishing an operation wholly new, and which must ultimately change the face of science in regard to the treatment of calculous disease. Lithotrity, or the method of pulverising calculus in the bladder, is therefore nothing more than those obsolete and obscure hints which, in the progress of ages, human ingenuity had suggested for the cure of the most distressing ill to which "flesh is heir," brought to maturity. It is not strictly an invention, in the sense attached to the word, when the mind surprises any of nature's secrets. The want of this condition, however, by no means impairs its importance; for it still extends the limits of science, it disarms this formidable disease not only of its terrors, but of its dangers, and converts that which hitherto has been regarded as the greatest of physical ills into an occurrence which will remain terrible only by remembrance, and calling for scarcely more than an ordinary expression of sympathy.

The first attempts at extracting stone from the bladder by the natural passage were practised by the Egyptians. Prosper Albinus, who has transmitted the details of their method, informs us that he saw an Arabian physician, named Haly, deliver a Turkish commander of the stone by the following process: A pipe of wood or ivory, of the proper size and length, was introduced into the urethra; air was then gradually blown into the bladder, and, the inflation completed, a stopper was adapted tightly to the external orifice of the pipe. An attempt was then made, by the finger introduced into the anus, to force the calculus forward, and engage it in the neck of the bladder, already dilated. The stopper being then suddenly withdrawn, the air was forced out briskly, by pressing on the bladder above the pubes. When the operator had succeeded by this manœuvre in forcing the calculus into the urethra, it was brought out by suction or other appropriate means. This operation, which (as Desgenettes and Larrey assure us) is still practised in Egypt, is the most ancient of the bloodless means resorted to for the cure of stone, and though it differs widely from lithotrity, yet still it bears some analogy to it, and may be considered its *point de depart*; for, like lithotrity, it consisted in the extraction of the foreign body by the natural passage. From this practice of the Egyptians, it is evident they were well acquainted with the fact

of the dilatability of the urethra; a fact still further proved by the spontaneous passage of calculi, measuring from five to six lines in diameter. Now, from the knowledge of this fact to the proposal of some means for dividing or reducing concretions exceeding this size, there is but one step.

The Greek physicians very unjustifiably neglected this method, from which much good might have been derived, and which, had it been kept more closely in view, might have contributed to the more early developement of means equally safe, but of more certain success.

Cystotomy, an operation of the highest antiquity, continued to be performed, and remained for ages the sad and sole resource of those whose acute sufferings armed them with courage against the terrors of the operation itself, and the apprehensions which the ignorance of those who performed it must have inspired. Its successes in the time of Hippocrates must have been very rare, at which period it was so fallen into disrepute as to be performed exclusively by itinerant empirics. Among these, Ammon of Alexandria had the boldness upon several occasions, where the stone was too large to be extracted by the incision made in the perineum, to employ a statuary's chisel for the purpose of breaking it into small fragments; and hence the name *lithotomos*, by which those who cut for stone were designated after him. Hippocrates supposed erroneously (and most probably his opinion was formed upon the unfavorable results obtained by those practitioners,) that all wounds of the urinary bladder were mortal. It is, therefore, matter of little wonder that his prejudices against lithotomy should have led him so far as to proscribe its performance altogether, characterizing it as a cruel and murderous operation. Nay more, he required an oath from his disciples that they should never perform an operation which he regarded as inevitably fatal. For a long time after Hippocrates, cystotomy remained degraded in the hands of the *latro chirurges*, and was utterly neglected by the schools, until the Greeks, Enos, Meges, Evelpistus, Ammon, &c. restored it in some degree to favor.

While the Greek schools taught this method of operating, Rome had no lithotomist, and Archagatus, who first proposed to cut there, was immediately banished. At length, however, the Greek operators gained footing in that city, and Celsus notices their manner of operating, but in a way so vague and obscure as to be nearly unintelligible in point of details. The precepts laid down by Celsus himself, and his method of operating, supplanted all pre-

ceding ones, and, with the exception of slight and sometimes defective modifications, was the only one practised for the extraction of calculus from the bladder, for a long lapse of centuries. During this long interval, all idea of extracting it by the natural passage had been either abandoned or forgotten.

Some time after the establishment of Christianity, medicine passed almost exclusively into the hands of the monks, and all surgical operations underwent the influence of the maxim "*Ecclesia abhorret a sanguine.*" Cystotomy fell, of course, into almost universal disuse. The barbers performed bleeding, bone-setting, and little else; while the wretched sufferers from stone, condemned to perpetual anguish, continued to receive from the monks those *infallible lithontriptics* and *divine sacrifices*, which possessed no other efficacy than that of enabling them to pass through a dreary period of exhaustion, hoping for an impossible benefit to the very brink of the tomb.

At the beginning of the sixteenth century, science received a new impulse, the lay professors, otherwise styled the university doctors, became numerous, and the cutting operation was revived. The improvements it successively underwent in the hands of the surgeons of that and the following century, it is not here intended to expatiate upon. The modification of this operation, called the *apparatus major*, was practised with success in Italy by Johannes Romanus, by his pupil Marianus Sanctus,* and by Octavian de Villa, who taught it to the Collots in France; by whom it was also practised in that country. It remained an inheritance in the family of the Collots until the beginning of the last century, when it was improved by Frère Jacques de Baulieu. His manner of operating was still further modified and improved by Cheselden, Ledran, Morand, Lecat, Louis, &c. Frère Come still further reformed this bold operation, by rendering more popular the *apparatus minor*. The zeal or genius of those great men could not, however, divest this operation of its danger, and, although it continued to be resorted to and practised with success, yet still humanity and science sighed for a milder method and more favorable results. The evil, which neither vigilance nor

* This method of operating was first described by Marianus Sanctus, and until lately has been generally ascribed to his master Joh. Romanus; but M. Bonino, author of a Biography of the Physicians of Piedmont, has discovered, in the archives of the Faculty of Turin, documents which prove that this method was first imagined by Battista da Rapallo, who died in 1510, and who had been the master of Joh. Romanus.

temperance could avert, was far from being quietly submitted to by its victims. They murmured against a direful alternative, which imported but too frequently for them nothing more than the wretched dilemma of a never-ceasing travail on the one hand, or an expeditious martyrdom on the other. Strengthened by a natural anxiety to seek some other relief than that which the cutting operation afforded, our ignorance of the causes upon which the formation of calculus depended was sought to be removed; and accordingly air, food, drink, habits of life, atmospherical, local, or morbid influences, were subjected to the most acute and laborious inquiry.

On reviewing the works of our predecessors on this subject, while lithotomy was still ascending to its utmost height of perfection, we find here and there some ingenious but ineffectual effort to bring its brilliant though bloody reign to a close: at all events, this interesting branch of surgery did not languish in such deplorable impotency, either from apathy amongst scientific men or from despondency in the sufferers. This is abundantly evident from the eagerness with which every proposal for its improvement, however fallacious, was hailed by the public; a fact strongly attested by the liberal rewards which have not been withheld even from empiricism. Every department of science has been put to contribution, with a view to cure or relieve this dreadful complaint; *materia medica*, botany, chemistry, &c. have been successively appealed to for succour; and, notwithstanding the promises of philanthropists, and the dreams of alleviation to which they clung, but which they could never realize, hundreds and thousands of poor sufferers have been swept away by this unrelenting malady, without other solace in their last hours than that inspired by the credulity of enthusiasm, and a false confidence in curative means which sad experience proved to be utterly inefficacious.

The history of dissolvents furnishes a strong illustration of this point. Twice during the last century did the sufferers from stone believe themselves rid of lithotomy. Every one remembers the sweet dream into which Miss Stephens lulled them. No stone was to have resisted the omnipotence of her remedies; her praises were echoed by the first physicians in Europe; nay, the lithotomists themselves, to their honour be it spoken, swelled the ranks of her partizans. Morand wrote two *Memoirs*, which he presented to the Academy of Sciences in 1740, on this subject; and in the following year he published a series of

cases, almost all in favour of the remedies. The confidence in their efficacy, established on the one hand by a parliamentary reward of 5000*l*, and on the other by the misguided, though well-meant, suffrages of such names as Hale, Hartley, Whitt, &c., now knew no bounds. The wonderful dissolvent, which was nothing more than prepared lime-water and soap, was quaffed with pleasure. The smallest portion of albumen, or concrete mucus, discovered in the urine, was hailed with acclamation: it was the stone that was dissolving and escaping under this inoffensive form. The enthusiasm at length became so general that the lithotomic instruments were proclaimed henceforth useless, and put under interdiction: nay, more, they were brought deridingly to trial, and a serio-comic sentence was pronounced upon them, that they should "hide their heads" for ever.

Joy, however, soon gave place to sorrow, and the sufferers learnt that they had mocked themselves with a delusion. Desperate experience reduced the eulogists to silence, and the instruments were reproduced, to the dismay of Miss Stephens and her partizans; while the deceived and unhappy patients rained on both a torrent of sarcasms and maledictions.

The second disappointment arose from the failure of the chemists. The labours of Scheele, Fourcroy, Vauquelin, Gay Lussac, Thenard, Berzelius, Prout, Marcet, and Davy, led to no other result than an accurate acquaintance with the intimate composition of calculous concretions; and the remedy of Miss Stephens, though totally inefficacious as a dissolvent of stone, did nevertheless fully establish the value of alkaline substances as a corrective of the lithic diathesis.

Another fact, no less ancient than the knowledge of the dilatibility of the urethra, is the possibility of penetrating through this canal into the bladder, by means of a straight sound. The use of the straight sound was known ages ago, as is proved from their having been found in the *Herculaneum*; in almost all museums of antiquities; as well as upon positive documentary evidence; and, indeed, it is not improbable in the earliest times, when notions of human structure were borrowed from the dissection of brute animals, that the first attempts at passing an instrument into the bladder should have been made with a straight sound: yet this fact, so ancient, and, as we shall see presently, so frequently reproduced from time to time in the annals of science, had remained so unnoticed and unknown that,

within but a few years, a distinguished surgeon of Paris, M. Amussat, proclaimed it as a discovery.*

After the Egyptians, who employed a straight pipe for the insufflation of air into the bladder, the first mention of the use of straight sounds is found in Albucasis, an Arabian writer, who gives a drawing of the instrument.†

Ambrose Paré gave directions for the division of calculi arrested in the urethra, even when placed close to the neck of the bladder. The instrument he employed for this purpose was straight. (Pl. fig. 7, 8, 9.)

In 1729, Joseph Rameau published a letter in which he extols straight sounds, and maintains, from reasons deduced from the structure of the urethra, their superiority over curved sounds.‡

The authors of the French Dictionary of Medicine and Surgery, published in 1772, maintain the opinion of Rameau.

Lieutaud speaks of straight sounds, and prefers them to the curved ones.§

At Rome, thirty years since, Professor Santarelli taught publicly that straight sounds were preferable to curved ones; and about the same time he published a Memoir at Vienna, on the method of simplifying the operation of catheterism, by the substitution of the straight for the curved sound, in which he points out the manner of effacing the first curvature of the urethra by bringing down the penis.||

Lassus, professor of the Ecole de Médecine of Paris,

* Remarques sur l'Urètre de l'Homme et de la Femme. (Extrait des Archives générales de Médecine, Dec. 1824.)

† Albucasis de Chirurgia, Arab. et Lat.; edit. J. Chænnings, 1778.

‡ Réflexions Anatomiques, en forme de Lettre, ou Analyse de la Dissertation de Morand, sur la Taille au Hant Appareil. Amsterdam, in 12mo. pages 6 and 7.

§ Lieutaud, speaking of the operation for puncturing the bladder, expresses himself as follows: "On peut toujours éviter cette opération, toujours dangereuse, et souvent infructueuse, parce qu'elle laisse subsister la cause de la maladie, en se servant d'une sonde droite, solide ou creuse. Je puis assurer sur la connaissance que j'ai de ces parties saines ou malades, qu'il n'y a aucun cas, si l'on excepte la pierre engagée dans le canal qui puisse empêcher une sonde droite conduite par une main un peu exercée, d'entrer dans la vessie." (Précis de Médecine pratique, tome I. p. 588.)

|| "I cateteri dritti sono conosciuti in Italia da 30 anni. Il Sig. Santarelli, prof. di ostetricia, nell'arcispedale di S. Spirito di Roma, in una sua memoria intitolato 'Recherche per Facilitare il Cateterismo,' pubblicata in Vienna nel 1795, dove trovavasi di passaggio, si è ingegnato a mostrare i vantaggi che i catteteri retti hanno sugli ordinarii, facendone vedere in due bellissime tavole non avere il canale dell'uretra alcuna curvatura fino alla prostata, e non stare che nelle mani del chirurgo lo far scomparire quella del disotto l'arcata del pube, abbassando il pene." (Extract from l'Osservatoire Medico of Naples, December 1825, page 187.)

taught the same doctrine but a few years afterwards; and Dr. Montaigu sustained a Thesis before the Faculty of Medicine of that city, in 1810, on the use of straight sounds.*

In 1813, Dr. Gruithuisen, of Munich, published an article in the Gazette of Saltzbourg, in which he demonstrates the facility of rectilineal catheterism.†

In 1817, and ever since, Dr. Civiale has made use of the straight sound: in 1818, the drawings of his different instruments were submitted to a commission of the Faculty of Medicine of Paris. Those instruments, as we shall see hereafter, were all straight.

In 1822, Dr. Amussat proclaimed, as a new conquest to science, the use of the straight sound. In announcing it as a discovery, (which I believe he did with the most perfect good faith,) it is evident he was ignorant of what his contemporaries, Gruithuisen and Civiale, had been engaged in long before this period.

The dilatability of the urethra, as well as the use of straight sounds, the primary elements of lithotrity, were therefore known in the earliest ages. From what follows we shall see that these data did not remain sterile in the lap of science, and that the idea itself of seizing stones in the interior of the bladder, and of extracting them through the urethra, in order to supersede the cutting operation, is by no means novel.

We would here recall to the reader's mind the bold practice of Ammon of Alexandria, who broke down the calculus in the bladder by means of a chisel introduced through the perineal incision: this method was sometimes resorted to by the lithotomists after him. Albucasis is the next who realizes this practice, but under very different and much milder circumstances.‡

* Propositions sur quelques Maladies des Voies Urinaires et sur le Catheterisme.

† "Catheterism by means of the straight sound meets with considerable opposition from the majority of medical men: nay, so much are they accustomed to the old idea that catheters must be modelled upon the direction of the urinary canal, that many of them cannot comprehend the possibility of introducing a straight sound into the bladder, and have maintained to my face that it was not possible. That which in reality exists, is possible. In two individuals upon whom I tried this method of sounding, I introduced without difficulty two glass cylinders, rounded at the extremity, and of the diameter of three or four lines, (one fourth of an inch.) I maintain, moreover, that this manner of sounding is infinitely more easy than that performed by means of curved sounds. Of this fact I have been convinced by different trials," &c. (SALTZBURG, *Med. Chir. Zeitung*, 1813.)

‡ "Quod si calculus parvus sit, positusque sit in meatu fistulæ uriniaræ, in eoque figatur, prohibeatque urinam ab exitu, equidem curato illum illis quæ

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Fabricius Hildanus, towards the end of the sixteenth century, in speaking of the bullet forceps, which appear to have been invented by Alexander de la Croix, or by Alphonso Ferri, mentions two instruments of this kind which he had in his own cabinet,* one of which he had so modified as to render it useful for the extraction of small stones from the urethra.

Ambrose Paré had his terebra, or piercer, as we have already seen.†

Haller relates an operation of this kind performed by Fischer, in which he perforated and broke up a large-sized stone engaged in the urethra.‡

But the efforts of our predecessors to reduce calculi by mechanical means were not confined to the urethra alone. Alsaharavius, the contemporary of Albucasis, proposed, by means of an appropriate instrument, to break up small soft stones in the bladder itself.§

Sanctorius,|| who proposed, in the commencement of the

præscripsimus, antequam ad sectionem perveneris; sæpissime enim ea sufficit curatio alisque sectione. Hoc etiam aliquando expertus sum, nimirum ut sumatur perforatorium ex chalybe præstanti damasceno; sit ad hanc formam, [the figure here is wanting: the drawings of the Arabs were very incorrect, and very often they are merely mentioned in the text,] triangulare sit, ad extremitatem acutum, in ligno intixum; Dein sumas filum et cum illo, ligato virgam subter calculum, ne forté in vesicam calculus revertat. Deinde intromittas ferrum perforans (terebram) cum lenitate in penis foramen donec ferrum perforans ad ipsum calculum pervenerit; et terebram cum manu tuâ revolve in ipsum calculum paulatim, paulatim, et tu conator perforationem ejus, donec illum calculum penetraveris per alterum latus. Equidem urina illico liberata erit. Diende cum manu tua, constringe reliquias calculi, ab exteriori parte virgæ illæ etenim perforatæ sunt, et cum urinâ educuntur: et sanatus erit æger, si voluerit Deus excelsis." (ALBUCASIS, lib. ii. cap. lx. pag. 287. Oxonii, 1778.)

* Præter prædictam terebram Parei at tenaculam, adhuc duo alia instrumenta ad extrahendum calculum e virgâ, in musæo meo habeo: quorum primum ex officina chirurgicâ clarissimi viri Dn. D. Joh. Andr. a Cruce, in Latina editione, pag. 51, in Italica vero, pag. 33, depictum, et ab ipso, *Asta* appellatum, ex parte mutuatus sum; ex parte inquam, nonnulla enim in ipso mutavi et correxi, uti lector, ex delineatione et descriptione videre poterit. (See Pl. fig. 10, 11, 12, 13, and 14.) Authore eo quidem utitur ad extrahendos globulos plumbeos ex vulneribus sclopetorum, ego vero illud ita adoptavi, ut etiam ad extrahendos lapillos, e virgâ quam aptissimum sit, modo sint extra perinæum, balanum versus; qui enim in perinæo inclusi sunt lapilli, instrumentum incurvatum requirunt. (See Pl. fig. 15 and 16.)—(De *Lithotomia Vesicæ*, pag. 754.)

† Œuvres.

‡ Disputationes Chirurgicæ, tome iv. page 71 and the following.

§ Accipiat instrumentum subtile quod nominat, *Mashaba Re bilia*, et suaviter intromittatur in virgâ et volve lapidem in medio vesicæ, et si fuerit mollis frangitur, et exhibit, si vero non exiverit cum iis quæ diximus oportet incidi ut in chirurgia determinatur. (*Liber Theoricæ necnon Practicæ*, 410. f. xciv. 1519.

|| Sauctorius Commentar. in primam sen. primi libri. Caunomensis. Avicennæ, Venet. 1626.

seventeenth century, to extract small calculi by means of a three-branched forceps, further proposed, when the stone was too large to be extracted entire, to perforate and crush it into fragments by means of a stilette.* He imagined also another instrument, which he calls a syringe, the use of which he fully explains,† and which is extremely curious, as it develops an entire method for the extraction of stone, and moreover recalls to mind the practice of the Egyptians, by the simple expression “vim vacui.”

Twenty years after Sanctorius, Severinus enumerates in his book “*De Efficaci Medecina*,” (cap. cxxxv. pars 11, de Sectionibus, page 131,) the instruments employed by different authors for the extraction of calculi. He mentions particularly the instrument of Joh. Germanus.‡

In 1561, Franco, or, more properly speaking, one of his relations, invented a four-branched instrument, which he called *Quadrupulus vesicæ*: (see Pl. fig. 21.) This instrument is the most remarkable of those we have inherited from the old surgeons. It was capable of seizing a stone as large as a hen's egg. It was, however, only destined to be introduced into the bladder through an incision in the perineum. A drawing and description of it are given in Franco's “*Traité très ample des Hernies*,” page 147.

The mechanism of the above-mentioned instruments had even in those times, and since, been frequently reproduced under a great variety of modifications; vid. Hunter's or

* Catheterem delineat trifidum: per eum in grandiore calculum, specillum sagittatum immittit, eo ut putat calculum dividit, ut fragmenta inter specilli crura cadant et possint extrahi. (See Pl. fig. 17, 18, 19.)—(HALLER, *Bibliotheca Chirurgica*, tome i. page 313.)

† “Quod si calculus rupta aliqua ex papillis et per ureteres ad vesicam dejectus, spacio hebdomadæ circiter cum urinâ non rejiciatur extrahendus est ne per moram magnus evadat: quod ut fieret, excogitavimus syringam, quæ in vesicam immittenda est, quando lotio est referta: (longitudo syringæ in viro est, unius spithamini cum dimidiâ) eâ immissâ, tunc instrumentum, quod unit tres cuspides (dum est in syringa, aliquanto plus impellitur, ut tricuspidēs separentur, et dilatentur: deinceps extrahitur instrumentum; quo peracto statim ab urina lapillus cum impetu ad sinum syringæ ubi est offerri solet; qui inclusus inter illas tricuspidēs statim extrahitur per syringam; si vero accideret quod urinæ impetus non feret lapillum ad tricuspidis sinum, tunc cum symphone per vim vacui attrahitur: in femina promptius, quia breviori syringâ eadem fieri possint.” (SANCTORIUS, *Commentarii in primam fen. primi libri Canon. Avicennæ*, Venet. 1760, pag. 421.)

‡ Aliud mihi instrumentum extractorium proponit Johannes Germanus, chirurgus et iatrochymicus sæpius a me, licet non satis laudatus, fistulare illud cum ternis, in extremo prehensoriis quasi digitalis interne dentatis et modice simis, recurvisque, qui dum inseritur fistula in cavum penem contracti manserit; postquam intrusus calculi locum attingit, claviculo, qui per cochleam in imo torquetur, debescunt, et corpusculum alienum apprehendentes rursus coarctantur, rotato cochleari scapo sic, ut revertentes organum extractum calculus sequatur.

Hale's pincers, Thomassini's, Garengot's, Gorcy's, Earle's;* and more recently, as we shall see bye and bye, in a curved shape.

The scheme of extracting stone from the bladder through the urethra, once revived, we see gained ground, and its means of execution went on improving, until the inventors, dissatisfied with their success, gradually abandoned them, and they were ultimately eclipsed and forgotten in the consoling and specious promises of the chemists. Lithotomy was retained as the *pis aller*, or dernier resort, while the pretended efficacy of divers dissolvents began to obtain universal confidence.

It is clear, however, that, in the days of these eminent men, a knowledge of the use of straight sounds prevailed more generally than the inquiry we have in view will permit us to suppose in times more modern. And accordingly, in the next attempts at improvement which come under our consideration, we find them established upon the idea that the urethra does not admit the passage of an instrument into the bladder, unless such instrument be curved.

Daniel Episcopus has left us an instrument of this kind for the extraction of stone from the bladder.†

Mr. Elderton, of Northampton, in 1819, convinced of the possibility of crushing stone in the bladder, published, in the Edinburgh Medical Journal, a description of an instrument which he invented for that purpose. Not having by me a drawing of this instrument, I shall, as briefly as possible, give a description of it.

When this instrument was closed, it had the appearance of a thick curved sound, the external extremity of which was received into a handle. The vesical extremity was slit on its length into two branches, which were joined by a hinge; these branches were also articulated midway between the two ends of the slit, so that, when opened by a particular mechanism, the aperture represented a lozenge, into which the stone might be engaged and held fast. In the interior of the canula, a long rod of steel, carrying a flat file at its extremity, descended, and by friction was to reduce the stone to powder.

Finally, in 1821, Sir Astley Cooper published, in the eleventh volume of the Medico-Chirurgical Transactions, a case of the extraction of calculi, by means of a curved instrument which he had executed by Weiss; and subsequently, in the same Transactions, an account of several other cases in which this instrument was employed with

* Vide Medico-Chirurgical Transactions for 1821, vol. xi.

† Fabricius Hildanus, op. cit. page 755. (See Pl. fig. 15 and 16.)

success. In the first of these cases, the history of which is given by the patient himself, (the Rev. Mr. Bullen,) eighty-four calculi, some of them the size of horsebeans, were extracted from his bladder. Sir Astley speaks of his instrument, and manner of using it, in the following terms: "The instrument which I first had made for the purpose of removing these stones from Mr. Bullen were merely common forceps, made of the size of a sound, and similarly curved; but Mr. Weiss showed me a pair of bullet forceps, which he thought would, with a little alteration, better answer the purpose I had in view. He removed two of the blades of these forceps, for there were four, and gave them the form of the forceps I had constructed. The blades of this instrument could be opened while in the bladder, by means of a stylette, so as to grasp and confine the stone, and they appeared so well constructed for the purpose as to induce me to make trial of them: (see Plate, fig. 20.) On the 23d of November, 1820, I first employed them, and the manner in which they were used was as follows: Mr. Bullen was placed across his bed, with his feet resting on the floor, and a silver catheter was then introduced, and the bladder emptied of its urine. I then passed the forceps into the bladder, and was so fortunate in my first operation as to extract eight calculi." (*Op. cit.* page 359.)

These forceps I have also seen successfully employed by M. Dupuytren.

We have now seen that the idea of reducing calculi in the bladder by mechanical means was not only entertained, but endeavoured to be executed by Albucasis, Alsaaharavius, Franco, Sanctorius, Paré, Fischer, the monk of Citeaux, and Colonel Martin. It will no doubt appear extraordinary, after reviewing the labours of those men for the improvement of the plan by perforation and crushing, that the two first authentic cases of success for the comminution of stone in the bladder should have been obtained by the individuals who were themselves the subjects of them, and who were both strangers to the healing art. The first, a monk of the monastery of Citeaux, was on the point of being operated upon by Hoin, an eminent surgeon of Dijon, when, terrified at the idea of the operation, he imagined a means of arriving in the bladder with a statuary's chisel, by introducing it through a flexible hollow sound. The chisel was a straight steel cylinder, sharpened at the extremity destined to act upon the stone. When this instrument was introduced, and brought in contact with the stone, the monk, by striking gently on the outer end of

the chisel, detached small fragments, which were carried out by the stream of urine. By this means, in the course of a year, he reduced the calculus entirely, and took great pleasure in showing to the curious the fragments carefully preserved in a small box. The second case, that of Colonel Martin, was one of only partial success, as will be evident on perusing the following extract from the *Edinburgh Medical and Surgical Journal*, for January 1828, p. 221.

“As the exact date and the precise circumstances of the case of Colonel Martin appear to be viewed with doubt by the authors of the Report on the work of M. Civiale, we give the following account, communicated verbatim by Dr. Monro from his father's manuscript lectures, in which we have seen the case. This reference proves indisputably that the date of Colonel Martin's operation was not later, whatever sooner, than 1800.

“Before I conclude this subject, says Dr. Monro, it may be worth while to mention the case of an officer of high rank in India (Colonel Martin), who persuaded himself that he might be able to rid himself of a stone in his bladder by rasping it and cutting it with a file. He accordingly procured a steel sound, of the ordinary length and shape, and about one tenth part of an inch in its diameter, which was made rough like a file on its convex part and sides for the length of three quarters of an inch from its point. He, with much courage and perseverance, introduced this into the bladder four or five times a day, filing the stone for half an hour or so each time, and persevered in doing so for nine months. During that time he rasped off a great deal of powder, and cut off a number of small pieces from the stone, several of which he sent me in a letter under cover to the Right Hon. Sir J. Sinclair, along with the instrument he had employed. He was unfortunately seized, at the time he wrote me, with a liver complaint, of which he died soon after, without having destroyed or discharged the whole stone.

“It appears that the stone had been in general lodged within and grasped by the sphincter of the bladder, in which situation he could reach it, and generally file it, without its slipping backwards into the cavity of the bladder.

“Notwithstanding the progress the colonel had made in his case, I apprehend there are few readers who would think his method should be prosecuted, and still fewer who would have the courage to practise it.”

I will add one reflection upon Colonel Martin's case: it is evident that his stone was not in the interior of the

bladder, but either in the prostatic, or farther forward in the membranous portion of the urethra, and consequently it must be classed with the cases of Ambrose Paré, Fischer, &c. and not with that of the monk of Citeaux.

I have now brought down my subject to our own times, and detailed all the circumstances that bear upon it. We have seen, in the progress of this inquiry, that the dilatability of the urethra, as well as the use of straight sounds, were known in the remotest times. We have seen, from the labours of the surgeons of the middle ages, that the crushing and extraction of stone was not deemed by them an impossibility. We have seen more than one amongst them propose a straight tube, containing another tube with branches to expand in the bladder, there to seize a stone, and a stilette to crush or divide it. Here is the theory of lithotrity, quite perfect; and, nevertheless, lithotrity is a curative method entirely new: for, however ingenious the old surgeons were, their instruments never went beyond the sphere of mere project. Sanctorius makes no mention of the application of his instrument. Severinus does not say that Germanus used his instrument. Neither can it be said that Daniel Episcopus, Hales, Sir A. Cooper, or Mr. Elderton, have contributed to the invention of lithotrity; their sounds being curved, and only adapted to the extraction of small stones. Still less did the means employed by the monk of Citeaux and Colonel Martin lead to this discovery, as they are too dangerous and too difficult of application to become models of imitation. Lithotrity is, therefore, an entirely new curative method for stone. To be convinced of this it is only necessary to compare its results with those obtained by the means in use before it was made known to the world. We have seen that its elements lay, some of them thinly scattered and almost forgotten in the domain of science, no person, until our own times, having collected them into a method at once complete and applicable.

We have on purpose refrained from classing the labours of Gruithuisen with those of his predecessors, on account of the efforts made by a French surgeon, who has lately turned his attention to this subject, to fasten upon him the merit of this invention. We shall examine with strict impartiality, and with a full sense of the esteem which this learned man deserves, his claim to this honour. We have no reputation to demolish or to build up by the depreciation of the services which Dr. Gruithuisen may have rendered to science, and we enter upon this discussion resolved to do justice.

What had been done for lithotrity before the time of Dr. Gruithuisen, we have already seen. We shall proceed to consider in what manner this distinguished individual advanced the state of science.

It was not by the employment of straight sounds: they were known from time immemorial.

It was not by proving the possibility of introducing thick sounds into the urethra: this fact has been known ever since strictures of the urethra have been treated by surgeons.

It was not by the originality of the idea of crushing stone in the bladder by mechanical means: the names, already so often mentioned, of Albucasis, Alsaharavius, &c. lay equal claim to this honour.

In fine, was it by better means of execution than those proposed by his predecessors that Dr. Gruithuisen's claim to the invention of lithotrity will be sustained? A single glance at the drawings which he has published in the *Gazette of Saltzburg* will suffice to convince any man, at all conversant with the operation, of the utter impracticability of crushing a stone in the bladder with such an instrument. In order to perform this operation, the stone must, in the first place, be laid hold of, and fixed so firmly that the surgeon may have nothing to fear from its slipping during the drilling process. Let us now see if Dr. Gruithuisen has fulfilled this indispensable condition of lithotrity.

About a century ago Marini proposed a wire noose, or piano cord, for the purpose of extracting small calculi from the urethra. This noose was to be passed behind the stone, much in the same way as we proceed when we attempt the extraction of a cork from the lower part of the neck of a bottle. This method has been employed about a year ago, with success, by Dr. Rousseau, of Paris. The wire noose which Marini employed for urethral calculi, Dr. Gruithuisen thought possible to apply to those in the interior of the bladder:* but he had not reflected that the mobility of the calculi would have formed an insurmountable obstacle to the employment of the means he proposes: besides, in the bladder, he could not place the stone in the noose with his finger, as he might have done in the urethra. Admitting even that the noose may seize the stone in the bladder, it is still obvious that it cannot be held with sufficient firmness at the end of an open canula, to support the action of a

* See Pl. fig. 26. All his instruments represented in the plate have been copied from the plate in the German journal.

drill. Besides, the importance of preserving the bladder from violence or injury must not be overlooked. Now, in what manner will this wire noose protect the organ against the action of his trephine or his lance-pointed stilette? Neither Dr. Gruithuisen nor any other man in his senses would have trusted to it.

Such is Dr. Gruithuisen's instrument for seizing and fixing the calculus. His next instrument is a crook, (see Plate, fig. 29,) with which he proposes to crush the fragments. To employ this is obviously impossible. By what means are those fragments to be fixed, before this crook can be brought to act upon them? Dr. Gruithuisen himself, notwithstanding the truth of his theory, must have been convinced of the inutility, for any practical purpose, of the instruments he proposed, as he never so much as attempted to obtain any of the results of which he supposes the facility so great. To place this point in a still stronger light, let Gruithuisen's instruments be compared with the instruments proposed by the older surgeons, and it will be obvious that the bullet pincers of De la Croix and Ferri, the forceps of Fabricius Hildanus, Germanus, Sanctorius, &c. were better calculated to point out the way for the invention of proper means for seizing and fixing the stone than Marini's wire noose, which Gruithuisen has reproduced; while the monk of Cîteaux's chisel, and the grinder of Paré and Franco, are, to say the least of them, as advantageous as Gruithuisen's trephine, or lance, which, after all, had been proposed by Albucasis. It is now time to ask, what are the great improvements of the ancient instruments upon which Dr. Gruithuisen's claim as the inventor of lithotrity may be supported? He has not proposed any thing more applicable than his predecessors had done; nay, his instruments in some respects are not so perfect as theirs. He has neglected to reproduce in his Memoir all the facts with which those men had enriched science, although he admits he was not unacquainted with their works.* He affirms that, with a straight sound, he can determine geometrically the size of the stone; that a dilatation of the urethra capable of admitting a sound from six to eight lines in diameter will suffice for the employment of his instruments. These assertions are certainly calculated to startle us.

He further proposes, for the destruction of calculus in

* The heading of his Memoir is, "Are we to abandon the hope entertained in former times of being able, at some period or other, of destroying stone in the bladder, either by mechanical or chemical means?"

the bladder, the perfusion of a quantity of some solvent liquid, introduced into the bladder by means of the double sound of Hales, modified by himself. The fluid he directs from the second story of the house of the patient. And, finally, he proposes galvanism, and the dissolving properties of this agent should have dispensed with all further research on this subject, as he assures us the hardest stones *will melt like butter* when subjected to a battery of from 600 to 1000 couples.

We shall bring the consideration of Dr. Gruithuisen's claims to a close by a quotation from the Reporters of the Academy of Sciences, pages 20, 21: "But, above all, it was necessary to mature and arrange those ideas which Dr. Civiale believed to be entirely his own, while views, if not identical, at least analogous, had been published in 1813, in a German Gazette, of the existence of which he must have been altogether ignorant. There, to his great astonishment, he discovered that the *initiative* of his lithontriptic system belonged to Dr. Gruithuisen, who had preceded him; and it was only necessary for him to cast his eyes over the plates and descriptions of those instruments, though rude and merely imaginary, to show him that he must take his rank after him, notwithstanding that he had himself discovered all, and without borrowing from any one else. But, if M. Civiale is modestly satisfied with the second place with respect to the vague, incoherent, though ingenious, plan of the Bavarian doctor, we are of opinion that he deserves the first place for the happy, and we may say learned, manner by which he has established, developed, and reduced to practice, a project which had been merely hinted at in a foreign journal; which remained uncultivated and forgotten in the country which gave it birth; altogether in mere theory and speculation, having never had the least attempt at execution, either in its instruments or in its application to practice."

It may be safely concluded, therefore, that Dr. Gruithuisen is not the author of lithotrity. It would, however, be unfair not to admit that he was aware of the possibility of crushing stone in the bladder. Indeed, I am not aware that Dr. Gruithuisen, whose claims are clear as far as they go, has ever set up any pretension to be considered the inventor. Officious and interested persons have placed him in this position, with a view to diminish the merit of the real inventor, Dr. Civiale. If in this discussion we have dissented from a claim which Gruithuisen has never himself asserted, it by no means takes away from the respect we

entertain for him as a philanthropist and a truly enlightened member of the medical profession.

All those attempts, ancient as well as modern, ingenious no doubt as they are, were however but the prelude to the invention of lithotritry. To whom, then, are humanity and science indebted for this long-sought for and important benefit? The instrument, in its present simple and perfect state, the operative process, as well as its successful application, are all due to the same distinguished individual, Dr. CIVIALE.

[To be continued.]

SARCOCELE.

Case of Sarcocoele, in which, after the removal of one Testicle, the Disease attacked the other, and was cured by the use of Bougies.

By JOHN NORTH, Surgeon, F.L.S.

IN many cases it may be difficult to determine whether the removal of disease is to be attributed to the efficacy of the treatment which is employed, or to some spontaneous operation of nature. I think, however, it may fairly be inferred that the successful termination of the second attack, in the following case, was owing to the means which were adopted.

A gentleman, twenty-six years of age, who had previously enjoyed uninterrupted good health, felt for some weeks a slight tenderness of the left testicle. He attributed it to cold, or fatigue, or some accidental and trifling cause, and paid little or no attention to it. For two months the pain of the testicle continued to increase, but as yet it was not very severe. The part was slightly enlarged. In this state he applied to me. I could not, after the strictest examination, ascertain any probable cause upon which the local affection might be dependent. He had not for many years had gonorrhœa, and had never any symptoms of stricture. He was directed to remain as quiet as possible, and to confine himself to a mild regimen. Leeches were applied to the part, and afterwards fomentations. Occasional purgatives were given, and small doses of calomel, combined with extract of hemlock, twice a day. A large-sized bougie was also once introduced into the bladder, to determine that there was no obstruction in the urethra.

Under this treatment the pain almost entirely ceased for a few days. The testicle, however, continued to enlarge, and it had now an irregular feel. Under the direction of two eminent surgeons, various means, both general and

local, were had recourse to; but without avail. The pain and swelling of the part slowly increased for three or four months, and, as the health of the patient was visibly declining from constant suffering, and every mode of treatment had been adopted from which relief could be rationally expected, it was deemed expedient to remove the testicle. It was now at least six times the natural size, and exquisitely painful. The colour of the scrotum was darker than natural. The patient cheerfully consented to the proposal, and the operation was performed.

Upon examining the testicle after its removal, it was found to be completely altered in structure. It presented the appearance of a scrofulous mass. In some parts it was very firm, in others comparatively soft. There was a very small quantity of fluid in the tunica vaginalis.

After the operation the patient speedily rallied, and in the course of a few weeks he was capable of pursuing his accustomed avocations. His health and spirits were completely restored.

About four months from this period he perceived, in walking or riding, a very trifling uneasiness in the right testicle, which would not probably have attracted his attention, had he not been taught by his former experience the necessity of timely precaution. He came to town immediately, in a state of much anxiety. I examined the part attentively, and found that it was tender to the touch, and rather harder than natural. It was nearly double the ordinary size; but it was at first doubtful whether this circumstance was to be attributed to disease, as, after the removal of one testicle, the other frequently becomes much enlarged. Mr. HEAVISIDE, who had before seen the patient, was again consulted.

It would be useless to detail minutely the different local and general remedies that were employed. It was evident that the disease was gradually gaining ground, and that it was pursuing the same course as the former. A slight and very temporary amendment, indeed, was perceived while he was under the influence of a mild course of mercury; at which time, hemlock poultices were also applied to the part.

Mr GUTHRIE's opinion was now taken. The testicle was about four times the natural size, and very painful on the slightest pressure; the general health of the patient bad; his mind, of course, anxious and dispirited. Mr. Guthrie recommended the continuance of decoction of sarsaparilla and the compound calomel pill, which he had been before taking; in addition to which, he directed that

a large-sized metallic bougie should be passed three times a week, and kept in the urethra for several minutes.

Considerable irritation was produced by this treatment along the whole course of the urethra, and a slight scalding in making water. For the first few times a trifling hemorrhage also followed the use of the bougie. In the course of a fortnight the size of the testicle was evidently diminished, and there was much less tenderness on pressure. The use of the bougie was continued for nearly three months, and during this time the swelling of the testicle, the pain, and indeed every appearance of disease, gradually subsided. The patient could take active exercise without the slightest uneasiness.

Several years have now elapsed since the occurrence of the disease. The gentleman has enjoyed perfect health, and is in full possession of the power of which he was once so much in danger of being altogether deprived; for there was every reason to fear that the remaining testicle must be removed.

It was the opinion of the late Mr. RAMSDEN, that some cases of sarcocoele might be relieved by removing, with bougies, a morbid irritability of the urethra, which he presumed, theoretically, to be sometimes connected with the origin of the complaint. Whether the case I have related tends to support this doctrine, I will not venture to determine. The efficacy of the practice to which it leads cannot, I think, in this instance, be doubted.

MR. COOPER,* (in commenting upon the use of bougies in cases of sarcocoele, as recommended by Mr. Ramsden,) remarks, "the novelty of this suggestion for a time attracted considerable notice; but the interest which it once excited has now died away; a sufficient proof to my mind that the practice inculcated was not of much value." Unless I am mistaken, Mr. Cooper much underrates the confidence which the most competent surgical authorities still place in the treatment suggested by Mr. Ramsden, although it may not, perhaps, be in such general use as to render an additional proof of its *occasional* efficacy altogether superfluous.

It is remarkable that the brother of the gentleman whose case I have above related was afterwards attacked with a similar disease, in consequence of which it became necessary to remove both the testicles. He died of pulmonary consumption. I am unacquainted with the progress of the disease, or with the treatment that was adopted in this case.

Upper Berkeley street, Portman square.

* Surgical Dictionary, fifth Edition, p. 1051.

VAGINAL DISCHARGES.

On the Use of Nitrate of Silver in Vaginal Discharges.

By GEORGE JEWEL, Esq.

THERE are no diseases, to which the female system is liable, more common, or, to a superficial observer, more diversified or anomalous in their character, than those which are attended by vaginal discharges. So intractable, indeed, do they sometimes prove, as to induce, by their long continuance, even under ordinary circumstances, the severest dyspeptic symptoms, feverish paroxysms, hysterical uneasiness, excessive languor, and emaciation; or, by operating upon the brain through the medium of the digestive organs, occasion other sympathetic affections, still more serious in their nature and termination.

It must be familiar to the practitioner that every discharge which issues from the vagina, not sanguineous, is among females usually included in the term *Leucorrhœa*, or "whites." There is also a very popular opinion that vaginal discharges have their origin in constitutional or local debility: hence a complaint of this kind is denominated a "weakness." That such a term should be employed to perpetuate an error in practice, is to be lamented; for I believe, if we investigate into the pathology of *leucorrhœa*, we shall find, for the most part, general or local increased action to be the exciting cause.

It would appear, from a strict investigation into the numerous causes of *leucorrhœal* complaints which have fallen under my observation, that one uterine affection gives rise to vaginal discharge more frequently than any other, namely, a subacute or chronic inflammation of the cervix uteri. I am disposed to believe, also, that very many of such cases are mistaken for carcinoma uteri, and that, in consequence, either no remedies are prescribed, or a very inefficient mode of practice is adopted. I am aware that, in many cases the train of symptoms about to be noticed may be attributed to an irritable condition of the uterus, so ably described by Dr. GOOCH. I cannot, however, easily relinquish the opinion I had originally entertained upon the subject, namely, that inflammation, either of the chronic or subacute kind, of the cervix uteri is, in the majority of cases, the exciting cause of vaginal discharge. The distinction, however, although pathologically recognised, cannot, I conceive, be material in practice: indeed, this will be obvious to the talented author himself, whose mode of practice, in cases of irritable uterus, appears precisely

applicable to cases of chronic uterine affections generally. Again, in some cases it may be difficult to discriminate between such diseases as I have alluded to, and incipient scirrhus disorganization. The following remarks will probably assist the young practitioner in his diagnosis.

This inflammation of the cervix uteri, like scirrhus or other organic disease of the uterine system, attacks occasionally at the period of life when the catamenia are about to cease; but I have more frequently found it to exist in married women, from the age of twenty-six or twenty-seven to that of forty, and very recently I have seen several severe cases occurring in young married females, within three months after the birth of the first child. The local symptoms in both diseases are very nearly allied, namely, occasional lancinating pain, more or less acute, through the region of the uterus; with a constant dull kind of pain about the inferior portion of the sacrum, the hip, or groin; attended also by an irritable bladder, or frequent desire to void the urine, and in some severer cases by tenesmus. The vaginal discharge is of a milky or cream-like colour, and is commonly, but particularly in the more acute cases, mixed with a dark-coloured or grumous secretion. Upon making an examination per vaginam in this disease, the os uteri will not be found opened to the same extent as in carcinoma, nor will its margin present the same cartilaginous hardness to the touch. The pain does not appear to be situated in the edges of the os uteri, as described by Mr. Burns, but in the cervix, as pressure upon this part alone occasions the patient to complain. The uterus will be found projecting lower in the vagina than natural; but this will depend upon the nature of the complaint: the more acute, the farther it will have descended.

It is not my intention to dwell upon the routine practice usually had recourse to in uterine diseases; such as the local abstraction of blood, perfect rest, narcotics, the warm bath, &c.; but rather to draw the attention of the profession to a therapeutical agent, which I believe has never, or to a very limited extent, been employed in such cases, namely, the nitrate of silver applied directly to the part affected; a practice which I have been led to adopt from having so frequently witnessed the extensive and healthy changes which have resulted from the application of this remedy to the different mucous tissues, when their secreting surfaces had taken on a disordered or unhealthy action. The mode I have adopted in its application has been either to conceal it in a silver tube, precisely upon the principle

as it is employed in cases of stricture, (except that the tube should be adapted to the size of the caustic,) or in the form of solution, in the proportion of three grains to the ounce of water, the strength being gradually increased. A bit of sponge, firmly and neatly tied to a piece of whalebone, is to be moistened with the solution, and carefully introduced into the vagina up to the os and cervix uteri. This mode of application is preferable to the injection, and can easily be effected by the patient herself. The application should be frequently made, or no permanent good can be anticipated.

The following cases, which I have selected from others in consequence of their having been unusually protracted and severe, will exhibit the mode of treatment successfully practised.

I. Feb. 24th.—Mrs. C., ætat. thirty-three, had been delivered, three years ago, of a healthy child, after an easy labour. For the last two years and a half she has been subject to constant and profuse leucorrhœal discharge, with frequent and shooting pains through the region of the uterus, and about the right groin, with occasional dysuria and tenesmus. The general health is greatly disturbed; bowels irregular, with loss of appetite. Upon making an examination per vaginam, pressure of the finger upon the cervix uteri occasioned considerable pain, which, in subsequent examinations, often continued several minutes after the finger had been withdrawn. The os uteri was not indurated, but considerably more open than natural. She had been under the care of several respectable practitioners, and the impression on her mind was that she was labouring under cancer of the womb.

In the first instance the usual mode of treatment was adopted: blood was abstracted by means of cupping from over the inferior portion of the sacrum, to the amount of eight ounces, and repeated three times, with an interval between each of about three weeks. She had taken aperients frequently, and injections of various kinds had been used with little or no benefit.

July 2d.—The nitrate of silver was conveyed by means of the tube, and applied to the cervix uteri for the space of a minute, which occasioned no degree of pain, except what might have been produced by the introduction of the finger.

6th.—The nitrate of silver again applied as before.

9th.—The discharge has diminished, but the pains not having abated, eight leeches were ordered to be applied to the right groin.

July 12th.—The nitrate of silver again applied.

18th.—The discharge is lessened considerably; and the patient now expresses a belief that she shall soon be restored to health, having previously imagined her case to be hopeless.—The nitrate of silver again applied.

27th.—The pain is relieved; general health is improved, and she sleeps well at night. The nitrate of silver applied in the usual manner. It is necessary to observe, that she has taken the hyoscyamus at night, (one drachm of the tincture,) and the bowels have been regulated by aperients. The following tonic has been prescribed: R. Infus. Rosæ ʒviiss.; Sulph. Quininae ʒi.; Elix. Vitriol. ʒi. M. fiat mist. sumantur cochlearia duo ampla ter in die.

August 8th.—The discharge is scarcely perceivable. The nitrate of silver applied as before.

25th.—The patient is perfectly well, having neither vaginal discharge nor local pains.

II. A poor woman, residing in Gardener's row, Westminster, about forty years of age, having several times aborted, had been subject to excessive vaginal discharge for the last eighteen months, with shooting pains through the pelvic region and about the coccyx, and excessive itching of the pudendum. The digestive function was greatly disturbed, and the system exhibited evident proofs of a highly disordered state of the general health. She had taken for a long period different preparations of bark, steel, &c., and had used various injections, with little or no benefit. Blood had also been abstracted locally, by means of leeches. Upon making an examination per vaginam, the cervix uteri was found in the usual irritable and painful state, the margin of the os uteri being perfectly free from induration.

June 12th.—The sponge, as before recommended, was introduced, being well saturated with the solution of the nitrate of silver, in the proportion of three grains to the ounce.

16th.—Applied as before.

19th.—The leucorrhœal discharge is thinner, and less in quantity. The patient was directed to introduce the sponge daily in the same manner.

30th.—Has regularly complied with the directions given, and says she is quite well.

August 2d.—Has had no return of the vaginal discharge, and her appearance is much improved. As a matter of course, attention has been paid to the state of the bowels and the general health.

A case of still greater severity has recently fallen under my notice, which resisted for a very long period all the means which had been tried by several eminent practitioners. At length the iodine was administered, under the influence of which, together with the application of the nitrate of silver, the disease gradually yielded, and the patient is now in perfect health.

I cannot conclude this paper without remarking that there is nothing more empirical than to hold up a particular remedy as a specific in the cure of disease, or to expect it invariably to exert its curative influence upon the function or structure of an organ, under all the diversified circumstances of morbid action. Let it not be imagined that I place such implicit confidence upon the nitrate of silver as to expect it to eradicate, as if by magic, all such diseases as those to which I have adverted: at the same time I confidently believe that, if it be judiciously applied where the vaginal discharge has its origin, or is kept up by inflammation of the cervix uteri or vagina, or by the irritable uterus, and when general principles have not been neglected, there is no remedy so likely to afford such immediate and permanent relief.

24, Sackville street; September 1829.

HYDRIODATE OF POTASH.

On the Adulteration of the Hydr iodate of Potash. By J. PEREIRA, Esq. F.L.S. Lecturer on Chemistry and Materia Medica, &c.

HAVING in two instances lately met with hydriodate of potash much adulterated with the carbonate of potash, and believing that this adulteration is very common, although it has not hitherto been noticed, I have taken the liberty of drawing the attention of the profession to this subject, through the medium of the London Medical and Physical Journal, and of pointing out the easiest methods of detecting it.

It is well known that iodine is very sparingly soluble in water; but that water holding in solution hydriodate of potash is capable of dissolving a larger quantity of iodine. In the General Dispensary, a solution termed *Liquor Iodinæ* is kept, made on this principle; that is, consisting of iodine dissolved in a solution of the hydriodate. My attention was first directed to the adulteration of this salt, by one of my assistants, who informed me that he had twice failed in making the *Liquor*. Thinking that he might have committed some error, I attempted to make it myself,

but found that the iodine was only partially dissolved. Of course, I immediately inferred that either the iodine or the hydriodate was impure. The iodine, however, I soon found was quite pure; and I then directed my attention to the hydriodate.

The salt was observed to contain but very few crystals: those that were noticed, however, had the appearance of the hydriodate. The greater part of the salt seemed as if it had been heated, so as to destroy its crystalline form. To the taste it was powerfully alkaline, and affected very strongly vegetable colours. These characters led me to suspect that it contained an alkaline carbonate. Muriatic acid, added to a solution of it, produced effervescence: the same takes place with the pure hydriodate, owing to the separation and decomposition of the hydriodic acid; but in the case of the suspected salt, however, the gas that escaped was conducted by means of a curved tube into lime-water, which it immediately rendered milky, proving that carbonic acid was present. A solution of the suspected salt, added to lime-water, gave a white precipitate, soluble with effervescence in muriatic acid; the same coloured precipitate took place when the suspected solution was added to a solution of muriate of barytes, and effervescence was produced by the addition of muriatic acid. Sugar of lead gave a white precipitate of carbonate of lead, instead of a beautiful yellow one of iodide of lead, which the true hydriodate gives. Hence it was clear that an alkaline carbonate was present; but was it potash, or soda? To determine this I proceeded as follows.

It is well known that the salts of potash impart to flame a beautiful pale violet colour; but those of soda a pure yellow. Hence, if a salt of soda be mixed with a salt of potash, its presence may be detected by the alteration in the colour of the flame. On this principle, I determined that the substance used to adulterate the hydriodate was carbonate of potash. A piece of clean packthread was wetted with a strong solution of the suspected salt. The wetted end was then dipped into the cup of tallow immediately surrounding the wick of a candle, so that it might be enveloped in melted tallow. It was then applied to the exterior of the flame, not quite in contact with the luminous part, but so as to be immersed in the cone of invisible but intensely heated air which envelopes it. An irregular sputtering combustion of the tallow on the thread took place, and the invisible cone of heat was rendered luminous, of a *pale violet colour*. Hence, then, it did not appear that

any salt of soda was present; otherwise, the colour of the flame would have been rendered more or less yellow.

Having thus satisfied myself that the impurity was carbonate of potash, I next proceeded to ascertain the quantity of it. Some of the salt was heated in a glass tube over a spirit lamp, to deprive it of water. Ten grains of the salt thus dried were dissolved in distilled water, and excess of muriate of barytes added. A precipitate, consisting of carbonate of barytes, took place, which was collected, and dried by a water bath. It weighed eleven grains. Now eleven grains of carbonate of barytes consist of

Carbonic acid . . .	2,42
Barytes	8,58

Hence, then, there must have been 2,42 grains of carbonic acid in ten grains of the suspected salt.

Assuming, from the strong alkaline taste of the salt, its powerful effect in turning green vegetable blues, and from its precipitating sulphate of magnesia, that the carbonic acid was combined with potash in the proportion to form the Carbonate, (Subcarbonate of the Pharmacopœia,) it must, therefore, have been combined with 5,28 grains of potash. Consequently the adulterated salt consisted of

Iodide of Potassium*	2,30
Carbonate of Potash, (Subcarb. Ph. L.)	7,70

10,00

The quantity of iodide of potassium is here inferred from the quantity of the carbonate of potash present. That this inference is correct, there can be, I think, but little doubt: certainly, the quantity of iodide cannot have been larger than is here stated. Now, assuming that the equivalent for iodine is 125, it follows that 2,30 grains of iodide of potassium contain about 1,66 of iodine. In the following experiment I obtained 1,5 of iodine, which is a very close approximation, particularly when we consider the volatile nature of this substance.

Ten grains of the suspected salt perfectly dried, were introduced into a glass tube, and strong nitric acid added to it by means of a dropping tube. Effervescence took place, and the iodine vapour, which was evolved, condensed on the sides of the tube. The iodine was then cautiously

* When hydriodate of potash is heated to drive off its water, it is converted into iodide of potassium; but, by solution in water, the latter is converted into the hydriodate of potash.

sublimed into another tube inverted over the first one. To guard against moisture, the second tube, which contained the iodine, was placed under an exhausted air-pump receiver, with sulphuric acid, for a few minutes. The iodine weighed 1.5 grains. Hence, then, we have a right to conclude that the above-mentioned quantity of iodide of potassium is correct.

If, as I suspect, the adulteration of hydriodate of potash be frequently practised, it will explain why such different statements of the effects of this remedy have been made. When pure, it is a most valuable remedy in glandular and other affections. But it must be evident to every one that very different effects result from the use of subcarbonate of potash instead of the hydriodate.

I shall now make a few remarks on the best methods of detecting adulterations of this salt. The substances most likely to be met with are the Carbonates, Sulphates, and Muriates; which may be detected thus:

1. If the *carbonates* are present, they may be known by lime-water, muriate of barytes, or sulphate of magnesia, producing a white precipitate in a solution of the suspected salt, soluble with effervescence in muriatic acid. Sugar of lead also produces a white precipitate, which effervesces on the addition of muriatic acid; chloride of lead being precipitated.

I would, however, here remark, that if any of the above precipitates be small, and the quantity of fluid large, the effervescence may be hardly, or not at all perceptible, owing to the solution of the carbonic acid in the fluid.

It may happen, also, that, although the hydriodate is adulterated with the carbonate of potash, yet the white precipitate produced by muriate of barytes may not be *wholly* soluble in muriatic acid, owing to the carbonate of potash of the shops usually containing some sulphate mixed with it.

2. The *sulphates* (as of soda) may be detected by a solution of sulphate of magnesia producing no precipitate; but a solution of muriate of barytes produces a heavy white precipitate, insoluble in muriatic acid. This adulteration is, I believe, very rare.

3. The *muricates*, according to Chevallier and Robiquet, are frequently present. Indeed, the latter chemist states that they may be one of the results of the operation to form the hydriodate. The peculiar saltish taste would lead us to suspect the presence of either muriate of soda or of potash. However, we may determine this chemically.

Add a solution of nitrate of silver to the suspected solution, and a yellowish white precipitate will fall down; to which add excess of liquor ammoniæ, and stir the mixture. After letting it stand for a little time, filter. If the filtered liquid throw down a white precipitate on the addition of nitric acid, the suspected salt contained a muriate.

The theory of this process is very simple. Nitrate of silver throws down, in a solution of the pure hydriodate, a yellowish white precipitate of iodide of silver, *insoluble* in ammonia. From the solution of a muriate, the nitrate of silver throws down a white precipitate of chloride of silver, *soluble* in ammonia. Hence, then, when a solution of nitrate of silver is added to a solution of the hydriodate adulterated with a muriate, we obtain a precipitate consisting of the iodide and chloride of silver. Ammonia dissolves the chloride, but leaves the iodide. When the liquid is filtered, and an acid is added, the chloride of silver is precipitated.

The above is the only easy process for detecting the muriates that I have been able to contrive. ROBIQUET has published one much more complicated, and less certain in its results. It is as follows.

“Take a determinate weight of quite pure hydriodate, (suppose ten grains;) take also the same quantity of the suspected salt. Dissolve them separately in the same quantities of water; and introduce them into small tubulated retorts, to which are attached receivers. Introduce into each of these vessels, through the tubulure, excess of nitric acid, so as to decompose the hydriodate of potash: nitrate of potash will be formed, and iodine separated. By the application of a sufficient degree of heat, the whole of the iodine may be volatilized. The iodine in each vessel is to be separately dried and weighed. The difference in weight will indicate the purity of the suspected salt. Afterwards the two distilled liquids are to be tested with nitrate of silver. The liquid obtained from the pure hydriodate will not give any precipitate with the nitrate of silver; whereas, that which arises from the hydriodate adulterated with a muriate will produce a white precipitate.” (*Dictionnaire des Drogues*, tome iii.; art. *Hydriodate de Potasse*.)

General Dispensary, Aldersgate street;
August 14th, 1829.

MESMERISM.

Experiments and Observations on Mesmerism. By RICHARD CHENEVIX, Esq. F.R. and E.S., M.R.I.A., &c. (5th and last Article.)

THE experiments which I now have to relate were made in presence of Dr. ELLIOTSON. The following notes were drawn up by him each day, and I transcribe them with a few verbal alterations, and remarks, to elucidate some points.

Dr. Elliotson says, "On May 14th, 1829, I was introduced to Mr. Chenevix, at the Royal Society, by Dr. Hodgkin, and invited to witness the phenomena of mesmerism, the next morning, at Mr. Chenevix's lodgings in Old Burlington street. On the following morning I found two females,* said to be sisters, sitting in two chairs side by side; the one apparently about eighteen years of age, of a pretty full habit, but a colourless and heavy countenance; the other apparently about twelve years old, with a fine skin, florid complexion, and animated expression.

"Mr. C. asked the elder whether she had any pain? She replied, 'Yes, in her forehead.' He passed his hands before her forehead two or three times, and I believe placed one of his fingers on it; when she said the pain had moved to the top of her head. The same operation was repeated on the top of her head; when she said the pain was gone. Mr. C. then began to draw down his hands before her, in the usual way of magnetisers, and frequently in contact with her face and clothes, and likewise placed his hands motionless on the front of the body and the loins, sometimes at the same moment; and in three or four minutes she looked sleepy, when he gently pressed down her eyelids, and inclined her head to one side, as if to place it for support against a piece of wood at the back of her chair. She remained for a considerable time, as far as I could judge by very carefully watching her features and her breathing, in a sound sleep; and was at last awakened by Mr. C., as any person might be awakened by another.

"As soon as this girl appeared fairly asleep, Mr. C. began the process with the younger sister; but, though she soon appeared sleepy, she was as long again in assuming the same appearance of sleep as the first; and, as I had placed my chair at the side of Mr. C. close to her, and consequently could not make very minute observations on the elder, I resolved to satisfy myself, as fully as I could,

* Mary Ann and Sarah H., mentioned in the last article.

that the little one played no tricks; and, if she had not shown more marks of sleep than she did for the first few minutes that her head reclined to one side, in the attitude of repose, I should have remained doubtful of the power of the manipulations. But at length, perhaps in about seven or eight minutes from the commencement,* I was as satisfied of her being in a sound sleep as a bystander could be. She did not waken until roused by Mr. C., as her sister had been roused. Her eyes and cheeks were then red, and her eyes heavy; exactly as is observed in persons really awakening from sleep. While they were both apparently asleep, Drs. Wright and Wilmot entered the room.

Mr. Chenevix was requested to attempt to throw the younger one into sleep again. He did attempt it during about four minutes, and she fell into the same appearance as in the beginning of the former process; and, on being questioned, she very ingenuously answered that she had not been asleep this second time.

"On the second morning I took Mr. C. to —, for the purpose of seeing the process tried upon persons who had never heard of mesmerism, who were ignorant of what was to be done, and had never communicated with Mr. C. Dr. — met us there, and was requested to send for any patient he thought proper. Mary P., about eighteen years old, was introduced. She was subject to hysteria, and had suffered a paroxysm that morning, and was asleep at the time she was sent for. She appeared a little flurried, and her pulse was 150. Mr. C. had scarcely touched her when an hysterical paroxysm came on, and lasted for an hour; during the whole of which the process of mesmerism was continued by Mr. C., who frequently attempted, but in vain, to calm and rouse her. She was perfectly insensible during the whole hour, but the fit was less violent (said Dr. —) than ordinary. A second fit, too, he informed us, rarely happened in one day. I could discern in this nothing but an hysterical paroxysm induced by agitation of mind. Mr. C. frequently attempted to remove the rigidity of her arms, and to relax the fingers by mesmerism, without the least effect.

"I now sent for a little girl labouring under chorea, but who was nearly cured by subcarbonate of iron. The same manipulations were tried for ten minutes, but not the least effect was produced.

* She was, in truth, asleep, as usual, in one minute; though, to a person who saw these experiments for the first time, she might not appear so.

"I sent for two other females, about eighteen or twenty years old, on both of whom Mr. C., judging from the tremulous motion of their eyelids, hoped for success; but the manipulations of mesmerism, continued for ten minutes, had no effect. One of them, indeed, questioned by Mr. C., said she felt her head light. He then, without speaking, moved his fingers before her forehead: she said it felt heavy. These sensations alternated four times, till, after a last manipulation, she declared her head to be quite well.

"Dr. — then brought in Emma W., about twenty-five in appearance, and subject to epilepsy; her age was, in fact, but eighteen. In ten minutes her eyes closed, and her head suddenly dropped forwards; but I did not consider her to be asleep until ten minutes more had elapsed. She then really seemed in sound and tranquil sleep. Her hands, when raised, dropped immediately; her eyes were completely closed. The whole frame remained motionless. I placed my face close to hers, for the purpose of seeing if her eyes were quite shut, and she did not move a feature; neither did the friction of her eyelashes cause contraction in any muscle. On being woke by Mr. C., the redness of her eyes and cheeks, and the heaviness of her look, were completely those of a person wakening out of sleep. Before she appeared to waken, Mr. C. asked her some questions, which she answered; and, while the conversation proceeded, she became gradually, as it appeared, quite awake. Mr. C. declared her to have been asleep, and her first answers, to have been given by her in magnetic sleep. He augured from this that in time lucidity might be manifested.

"May 17th, carried Mr. C. again to —, where he proceeded to mesmerise the hysterical girl, Mary P. He said that, to his mind, it was clear that the paroxysm of yesterday was the effect of mesmerism; and he was inclined to think that, should another be brought on today, it would be slighter. He looked upon this patient as the most susceptible he had yet met with in London. She was much calmer to-day on coming into the room than yesterday: her pulse was 130. She presently closed her eyes, and her head went from side to side, as that of a person asleep; and I felt satisfied that she was so. In a few minutes convulsive motions began, and continued near an hour. Dr. — said that her convulsions were generally preceded by a short drowsiness and insensibility. At length the convulsions became very violent, and Mr. C. again and again attempted, in vain, to tranquillize her, to calm her arms,

legs, &c.; and we thought it prudent to stop the process. She was carried to her bed, strapped down upon it, and in about five minutes she returned to herself, and became calm.*

"Mr. C. then mesmerised Emma W. In about the same time as yesterday she looked asleep; her hands, when raised, dropped as before; and Mr. C. signified that he thought her to be asleep. She remained so for ten minutes, Mr. C. proceeding as he expected her to answer him in that state. When he addressed her, however, she spoke as if awake, and assured us that she had not been asleep, either to-day or yesterday; contrary to Mr. C.'s expectation. She said that both times she felt drowsy. He then mesmerised her arm, with the intention, as he said, of paralyzing it. She said it pained her. After a few transverse passes, she said the pain was gone. The same effects were produced, and by the same means, on her head. He then placed a piece of paper (as related in a former article) on one of her arms, and desired her to raise them both. She felt some difficulty in raising that on which he had put the paper. When she had walked about half-way across the room to go away, he darted his hands violently towards her feet. No effect ensued. Mr. C. said that he had often arrested the progress of his mesmeric patients, and rendered them motionless, by a similar process.

"May 18th.—The chorea girl, who had felt her head successively light and heavy on a former day, had commenced menstruating this morning, though she had not done so for several months. Three more female patients were submitted to the process, but with no apparent result.

"A fourth patient was now seated in the chair. She exhibited no apprehension of any kind, but was talking very cheerfully to me. Mr. C., without saying one word to her, began his manipulations, at the distance of half a foot, but did not touch her. In about one minute she said, in a plaintive voice, "Sir, don't do that;" and seemed in great distress. She afterwards told us that Mr. C. drew weakness

* My opinion upon this patient is, that both these paroxysms were induced by mesmerism. I have generally seen, too, that the intensity of such attacks diminishes each time, while the patient is undergoing the process. A girl, aged ten, had eleven fits the first day I mesmerised her, all, from first to last, decreasing in violence and duration. The second day she had three, and never after any. Had the patient, whose case is here recited by Dr. Elliotson, been mine, I would not have permitted any one to touch her, but would have continued the operation that day, and afterwards. Persons unacquainted with the extraordinary effects of mesmerism may, however, well be alarmed at them; and the prudence of these gentlemen was highly commendable.

into her, and made her feel faint. She complained of pain in the abdomen. Mr. C. moved his hands transversely before it, and she said the pain was gone. (She had felt a slight pain there before we saw her.) She then complained of great uneasiness in her chest; and after some transverse movements, made by Mr. C. with the intention of removing it, she declared it was gone. The pain in the abdomen returned and ceased, as before, by the manipulations of Mr. C. Mr. C. then darted his open hand towards one arm, without touching it, and told her to raise both arms. She scarcely could move that which he had thus mesmerised. He then made some transverse passes before it: she at once moved it, and declared the stiffness and uneasiness to be gone. The same was repeated with the other arm, and with the same effect. He told her to lift her feet: she did so with perfect ease. He then darted his hand toward one leg, and she stared with astonishment at finding that she could not stir it without the greatest difficulty. He then made some transverse passes, when she instantly raised it, and said there was neither pain nor stiffness in it. He then closed her eyes, and put a very small piece of paper, weighing perhaps one grain, on her foot, in such manner that it was utterly impossible she could perceive it: she could scarcely move that foot. The paper was removed in the same manner, and without her knowing it: she could instantly raise her foot. She now complained of pain about the heart: Mr. C. demesmerised her, and she said it was gone. In all these experiments, Mr. C. had most clearly announced to me, in French, what his intentions were; and the effects coincided so accurately with those intentions that I confess I was astonished. Deception was impossible. Mr. C. looked round at me, and asked, in French, if I was satisfied. I really felt ashamed to say no, and yet I could scarcely credit my senses enough to say yes. I remained silent. He then asked me, still in a language unintelligible to the patient, 'Shall I bring back a pain or disable a limb for you once more?' I, of course, requested that he would do so. He complied instantly, giving her a pain in the chest once, and disabling her several times from moving her limbs, and removing those effects at pleasure, according to the intentions which he announced to me; the whole taking place exactly as it had done in every former trial on this woman. As, however, she began to feel faint and uncomfortable, Mr. C. judged it prudent to desist; assuring me that such experiments as these should never be repeated, but with moderation, and only by experienced mesmerisers.

"On questioning this woman a few days after Mr. C. had produced such decided effects upon her, respecting what had occurred, she declared that he had disabled first one limb, then another, and restored their use, exactly as appeared to be the case; that she never had felt any thing like it in her life before; that, though she had not slept during the operation, she had felt very drowsy; that she had not been at all afraid; but, said she, 'I hope never to see that doctor again, as I am sure he has something to do with the devil.'

"On May 20, I witnessed some experiments on another patient, at Mr. C.'s lodging, in company with Dr. Wright; but the results were not satisfactory."

Here ends Dr. Elliotson's narrative.

The persons who have given up the most time and attention to such mesmeric experiments as I could make in London, were Drs. Whymper and Elliotson, with Mr. Smith; and they, too, have witnessed the most extraordinary phenomena. Other persons saw but one or two trials, and with five to one against success, that number is small. I will, however, conclude the subject by summing up and discussing the evidence of all; for, like every other evidence, this must be appreciated not piecemeal, but in toto.

Confining myself to the experiments made in London; admitting five failures to one success; bearing in mind that one positive experiment can do more to support a fact than ten negative experiments can do to subvert it; that "*plus valet unus affirmans quam mille negantes*;" I proceed to say that I can quote, as witnesses to the mere fact of sleep, the Marquess of Lansdowne, Dr. Babington, jun. Drs. Elliotson, Hargood, Holland, Milligan, Prout, Whymper, Wilmot, Wright, Messrs. Brodie, Smith, Bagnold; as witnesses of other effects, Drs. Elliotson, Milligan, Whymper, Messrs. Earle and Riadore Smith: fifteen most credible men, or there are none in the world. These credible and highly enlightened men, then, admit the facts which they saw; but, as is very natural on so novel a subject, explain them by various theories. Dr. Prout, who is not prepared to admit that my action upon Sarah H. was the cause of her sleep, or to believe in mesmerism, is yet at a loss to know to what other agent but me, he can ascribe that sleep. Mr. Brodie explains it as he does giddiness by a rotatory motion, or sleep produced by rocking a child. Lord Lansdowne and Dr. Holland attribute it decidedly to me, but deny the existence of any new agency. Dr. Hargood

attributes all to the imagination of the patient, influenced by me. Dr. Milligan, struck by the promptness of the effect, admits that he cannot explain it by any of the usual modes which produce sleep, but inclines to admit a peculiar influence exercised by me. Mr. Evans Riadore was not very remote from a similar opinion. Mr. Earle, giving ample and able testimony of facts, is more a believer in the operation of the patient's mind than of my mesmerism. Drs. Whymper and Elliotson, and Mr. Smith, attempt no explanation; but the facts which they saw need no comment; for it is absolutely impossible to explain them by any known agency. It will be sufficient, then, to prove that these effects are inexplicable by any of the hypotheses advanced by the persons above quoted, in order to prove that what they saw is also inexplicable by their hypotheses. Imagination shall be first discussed.

Imagination cannot act in conformity with the expectations of the operator, unless it has been previously told what is expected from it. Now, even admitting the minds of Garrand and Gould, in the Coldstream Guards hospital; of the woman at St. Bartholomew's hospital; of the woman whose case has been just stated by Dr. Elliotson, to have been prepared for *some* result, still it was impossible for these patients to guess *what* my intention was in each experiment. Yet their sensations, by the fair avowal of Dr. Whymper and Mr. Smith, of Mr. Earle, and of Dr. Elliotson, most accurately corresponded with the intentions which I had previously announced each time. All these witnesses, too, strictly watchful to prevent deception or collusion, confess that nothing of the kind could be: for, till the minute of trial, I had never seen any of these patients; had not, for twenty years, been in any of the hospitals where I operated; and could not know what persons would be selected for trial, since the physicians themselves did not know whom they would choose. Imagination, then, cannot be admitted as the agent by which these effects were produced. Should a patient as often divine the operator's will as occurred in these experiments, the wonder would be as great as if the coincidence resulted from a new agency; for his mind must, indeed, be endowed with supernatural sagacity.

Mr. Brodie saw but one experiment and one result, sleep; the least interesting and the least convincing of any. But let him admit the evidence of Messrs. Earle and Smith, of Drs. Whymper and Elliotson, (and surely we must sometimes credit each other's testimony;) let him connect their

facts with his facts, as proceeding from one cause. How will he explain this truth: that, at my will, whichever limb I pleased, of a woman whom I had never beheld till that moment, was deprived of motion and restored to motion instantly, without my giving that woman any intimation of what my will was? That I gave her pains, and took pains away from her, as I pleased, she being ignorant of my intention? That Garrand was almost nailed to his chair by the same means? That Gould was wakened from profound sleep by transverse passes made behind his back, unknown to him? The rocking of a cradle could not do all this. Mr. Brodie diffidently says, "With such information as I at this moment possess, &c." Most heartily do I regret that his occupations did not permit him to follow up the subject more particularly; for no testimony can be of higher value than his. Had he seen the experiments here alluded to, his rationale of the facts would have been very different.

Upon the whole, sufficient time could hardly be allotted by any of the persons here named to these researches; and they were attempted under great disadvantages from that circumstance.* Things which are so directly opposite to current opinions should be witnessed more than once before they are judged. Could these phenomena be infallibly produced at will, and before an unlimited number of witnesses, the question would be decided at once. Sentence might long since have been pronounced upon a public theatre. But they are too delicate for common exhibition.

To combat all evidence on a subject which seems so marvellous, to destroy the value of every testimony, they who think that no man can see but themselves, adduce the many errors and impostures which have gained evidence in the world for a time, and then have been exploded. They appeal to the fables of antiquity, to the superstitions of Mahomet, to the savages of Africa. But can any man of good faith compare the principles and conduct of mesmerisers with those? The ancients knew not what the diffusion of knowledge was, and science was a secret of priestcraft. Mahomet founded an empire and a sect, and these two great prizes of his ambition rewarded the lies and devastation which his military apostles spread through the world. Savages, at all times, were the easy dupes of superstitious credulity. But the partizans of mesmerism,

* It is impossible to give an elementary course of mesmerism in these articles; but the "Instructions Pratiques," by M. DELEUZE, in one small vol. 8vo., more than supply every deficiency.

stimulated by no interest but truth, appeal not to an ignorant multitude, easy to deceive or to fanaticise; but to men of science and genius, scrutinizers of nature, ponderers upon her works. Would the author of the "*Mecanique Celeste*," which not fifty men living can comprehend, condescend to lay his opinions bare to umpires so much his inferiors as they would be, whom mesmerism could this day deceive? Would all the learned disciples of this art in Europe give up their honest fame for the reputation of impostors? Some antagonists avail themselves of the discredit into which Mesmer fell by his own doctrines. But this is a fallacious mode of reasoning; for, if his doctrines are true, Mesmer is absolved from this imputation. Mesmer was, indeed, declared to be the greatest mountebank of the last century; but by whom? by the greatest mountebank of modern history, Bonaparte. That Mesmer was disinterested, a profound philosopher, an original discoverer, cannot, indeed, be supported by the history of his life: his rapacity was excessive; his injustice, in not sufficiently acknowledging the prior claims of Maxwell, Greatreakes, Gassner, &c. was extreme; his own title to the doctrines which he taught was small. But those doctrines are independent of his talent or his veracity: they stand upon their own merits; they have been proved by thousands; and, if his name has here been affixed to them, it is the hope that the appellation of animal magnetism, now deemed to convey an erroneous notion of this agent, may be discarded.

How strangely must they estimate nature, how highly must they value themselves, who deny the possibility of any cause, of any effect, merely because it is incomprehensible? For, in fact, what do men comprehend? Of what do they know the causes? When Newton said that gravitation held the world together, did he assign the reason why the heavenly bodies do not fly off from each other into infinite space? He did but teach a word; and that word has gained admittance, as it were, surreptitiously amid causes, even in the minds of the most enlightened, insomuch that to doubt it now were a proof of ignorance and folly.

Let an untutored Indian hear, for the first time, that the moon, which rolls above his head, is suspended there by the power of gravitation; that she obeys the influence of every little speck which his eye can discern in the firmament; of orbs placed beyond them again, but invisible to us, because their light has not yet reached our globe; that the earth cannot be shaken, and the shock not communicated through the whole system of the universe; that every pebble under

his feet as virtually rules the motions of Saturn as the sun can do. Let him then be told that one sentient being, placed in the vicinity of another sentient being, can, by a certain action of his nervous system, produce the daily phenomenon, sleep, and the rarer one, somnambulism; and which of these lessons would he be the most prompt to credit? Certainty not that which inculcates an impalpable action and reaction between infinite masses, separated by infinite distances. The pride of learning, the arrogance of erudition, deem it ignoble to believe what they cannot explain; while simple instinct, struck with awe by every thing, is equally open to credit what it cannot as what it can comprehend, and admits no scholastic degrees of marvellousness.

Whatever explanation be given of mesmeric phenomena by those who have seen them once, or by those who have seen them repeatedly, still the facts remain the same; and these are the truly precious parts of every science. If medical men assert that the alleged cures of mesmerism are performed by the mind, and that this is the peculiar province of imaginative therapeutics, do they not culpably neglect the most powerful agent of mental medicine, if they do not practise mesmerism? If imagination can cure, and if this be its most energetic exciter, then excite it thus; cure by imagination, and the sick will bless you. If the cause be analogous to a rotatory or a rocking motion, then whirl or rock your patients into sleep and health. If it be a new agency, find it out, and prove it by experiment. Many of the persons named in these articles have promised to put it to this test. I here summon them to fulfil that promise, and to fulfil it speedily. The interest of science demands it, whether it be to establish a truth, to subvert an error, or to detect an imposture. All my hope is that ere long the public may hear from them and others, that "mesmerism is true"—or false.

HOSPITAL REPORTS.

WESTMINSTER HOSPITAL.

Operation for Impermeable Stricture. Death of the Patient.

RICHARD REYNOLDS, æt. fifty-six, had suffered nearly thirty years from stricture of the urethra. He was admitted April 15th, 1829. He passes upwards of a pint of urine, by drops, in the twenty-four hours. Bowels regular. General health but little impaired. A bougie cannot be passed, and each attempt to introduce the instrument has given rise to severe rigor. The seat of the stricture is supposed to be at the bulb of the urethra.

July 25.—Mr. WHITE determined to make an incision in the perineum, and cut through the stricture, which there was no hope of curing by common means. The patient was placed as for the operation of lithotomy. A straight staff was passed down to the stricture, and an incision made, an inch long, exactly in the raphe downwards to within half an inch of the anus. The index finger of the left hand was now introduced into the wound; the bulb of the urethra was raised; the membranous portion of the urethra opened, and the stricture divided. Some difficulty was experienced in passing a catheter into the bladder, which is by no means uncommon in this operation. Mr. White did not succeed in his attempts to pass the instrument; after which, Mr. GUTHRIE, having changed the posture of the patient, succeeded in introducing a female catheter. It was fixed in the urethra by a roller, and a T bandage was applied. Some hours after the operation, the man passed a pint of urine through the catheter.

26th.—Has had an uncomfortable restless night. Tongue foul, pulse eighty-five, skin hot; bowels open; urine has passed freely by the catheter.

28th.—Continues feverish. Pain in the perineum; urine high coloured and thick. Ordered saline medicine.

From this time to August 12th, the symptoms of general irritation and fever continued to increase. On the 12th the wound had a sloughy appearance, and the urine passed as freely through it as through the catheter. On the 16th he died.

Examination twenty-four hours post mortem.—The bladder was found to be much thickened. The ureters were enlarged, and the canal of the urethra was obliterated; on each side there was a false passage. There was neither perineal fistula nor infiltration of urine in the cellular membrane.

MIDDLESEX HOSPITAL.

In connexion with the preceding case, we may mention that of Crispin Hollings, æt. fifty-three, whom we saw placed on the operating table at the theatre of the Middlesex Hospital, on the 12th of August. We observed a granulating wound in the perineum,

and an elastic catheter in the bladder projecting through the rectum. We learnt that, a week before, an attempt had been made by a skilful surgeon to divide a stricture in this man's urethra, where the passage had been long obstructed, to relieve retention of urine. The attempt, however, had failed, and the surgeon had adopted the alternative of puncturing the bladder through the rectum.

Mr. MAYO, under whose care this case at present fell, proceeded to operate in the following way: He passed a moderate-sized silver catheter along the urethra, till it met with resistance at the common seat of stricture, the ligament of Camper. He then with a scalpel opened the half-closed wound in the perineum, and cut upon and exposed the end of the catheter. The catheter was then half withdrawn, and the operator made an incision about half an inch in length from the end of the pervious part of the urethra, in the direction of the natural channel, cutting through the callous substance which formed the stricture, the edge of the knife being turned outwards. Mr. Mayo then tried to pass the catheter into the bladder, but found no passage; upon which he reintroduced the scalpel, making two incisions, one as before, the other beginning at the same point, but with the edge of the knife directed upwards. The catheter then passed readily into the bladder, and was secured there; the elastic instrument being at the same time withdrawn from the rectum.

The patient has gone on uniformly well; nothing has occurred worthy of notice, except a continuance of the passage of urine by the rectum, the opening through which into the bladder is slow in healing.

The operation lasted about three minutes. This is the third case, within twelve months, in which Mr. Mayo has performed this operation at the Middlesex Hospital.

Mr. Mayo observes, that the occasions on which this or any other operation for dividing strictures is necessary in private practice, are extremely rare; while among the poor, who go on suffering severely year after year from stricture, without seeking relief, they are proportionately frequent.

The operation is strictly a dissection. When the end of the catheter has been exposed resting on the stricture, the operator is left to rely entirely upon his anatomical knowledge to enable him to thrust the scalpel in a just direction through the indurated substance into the dilated channel of the membranous portion of the urethra beyond. We are supposing that the stricture with which the operator has to deal is situated in its common place, the ligament of Camper.

Mr. Mayo withdraws the catheter on the second day, and replaces it with another; the catheter is changed every day afterwards. In some cases the silver catheter produces little irritation, and may be used to the end; in others the elastic gum catheter is found to be preferable.

Strangulated Crural Hernia, with Omentum adhering to the Sac.

ROSANNA AINSWORTH, ætat. forty-four, was first afflicted with crural hernia on the left side in January last; the tumor was easily reducible, and she has worn no truss. On the 16th of August, towards evening, she was attacked with vomiting and purging, and in the night the rupture came down in larger volume than usual, and she could not return it. She was brought to the Middlesex Hospital on the evening of the 17th. At ten o'clock P.M. Mr. MAYO saw her. She was not relieved; what she took into the stomach she vomited; she was alternately chilly and hot, the pulse 120; the belly is large and soft, the abdominal parietes remarkably thin; the tumor is firm and doughy, painful, and extremely sensible to pressure; there is much tenderness of the belly just above the left groin. The patient had been bled and put in the warm bath, where ineffectual attempts were made to reduce the tumor; a large injection had been administered. Under these circumstances Mr. Mayo proceeded to operate forthwith.

The sac having been opened, the stricture, which was uncommonly strict and tense, was relieved by dividing Gimbernat's ligament. A fold of bowel, of a mahogany colour, was then returned. There remained in the sac a portion of thickened omentum, which was very generally adherent to the sac: it was left there, the wound dressed, and the patient put to bed.

No feature of importance occurred during this patient's recovery; but it was thought prudent to apply leeches three several times to the neighbourhood of the umbilicus, at which part the belly for several days remained uneasy and tender on pressure, although the bowels had acted freely in twenty-four hours after the return of the hernia.

The dressings and bandage were removed on the fourth day, and a poultice alone substituted in their place; under which treatment the omentum, which was seen in the wound dark and inclined to slough, granulated, and, as the wound closed, seemed well fitted to form a plug at the neck of the sac, calculated to prevent the return of the rupture.

In a case of scrotal hernia, in which Mr. Mayo operated a twelvemonth ago at this hospital, there was a much larger and an adherent mass of thickened omentum in the sac. Mr. Mayo removed the thickened part, and returned the rest into the belly, having tied ten or twelve vessels with single threads. The patient recovered, but the hernia has since come down again, and in considerable volume.

Fungous Tumor of the Lip.

WILLIAM LONG, æt. fifty-one, for three or four years had observed a wart upon the middle of his under lip: it gave him no inconvenience till about a year ago, when it began to enlarge, and,

as it grew, became painful; latterly he suffered nearly constant sensations of darting pain, shooting from the lip to the cheek. Various attempts were made, by the use of escharotics and *partial* excision, to remove the complaint.

This patient came into the Middlesex Hospital on the 11th of August. The tumor was then as large as a middling-sized orange; it was a soft and spongy fungus, and grew from an extensive base, consisting of half the breadth of the under lip, the angle of the mouth, and a third of the breadth of the upper lip. The substance of the lip and cheek immediately adjoining the tumor was extremely indurated.

On the morning after this patient's admission, the tumor bled profusely, which led Mr. Mayo to determine upon its immediate removal. This was effected by cutting through the cheek and lips, at about one third of an inch from the base of the fungus. The flesh at this distance from the fungus was firmer and harder than natural; but Mr. Mayo considered it as thickened from irritation only, not as forming part of the disease.

The operation left a large gap in the face, the edges of which were supported by adhesive plaster and bandages; for it seemed impossible to bring the cut surfaces into any manner of contact. The case has gone on uniformly well, and it is quite surprising, as the wound has cicatrised and contracted, how small the deficiency in the under lip appears.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

THE readiness with which Mr. GUTHRIE gives a trial to every remedy which is supposed, by any adequate judge, to possess peculiar powers, is as laudable as the attention paid to the cases whilst under treatment. They are delivered over to the various students in attendance, whose names are attached to the cases, and are the best vouchers for their authenticity. From 150 to 200 persons are seen every Tuesday and Thursday morning, each being called up according to a numerical ticket given to them on their arrival. Of late, the Oleum Terebinthinæ has been the great object of attention, and upwards of thirty cases have been treated, nearly all with complete success. We have selected the following as illustrative of its powers in various kinds of inflammation of the more internal parts of the eye, to which its use has been principally restricted. It will be seen that in some it supersedes the use of mercury, which in many constitutions it is most desirable to abstain from, and this even in pure cases of syphilitic iritis. In the rheumatic iritis it is certainly a most efficient remedy, and in many other more anomalous affections it seems decidedly advantageous. It is administered in drachm doses, with mucilage and any medium which may make it most agreeable, and is continued until its action upon the kidneys and bladder becomes evident: indeed, few patients seem to benefit by its use until the scalding

of the water, and the increased desire to pass it, become troublesome. When these symptoms are too severe, diluents, such as linseed-tea, &c. are had recourse to, with gentle purgatives, opiates, warm bath, &c. In no one instance has any permanent inconvenience occurred from its use.

CASE I.—George Kemmis, æt. fifty-one, a tall athletic man, in March began to see double, accompanied by uneasiness in the left eye, supposed to be from the east wind: for this he was bled, cupped, and purged, with advantage. The middle of May he suffered an attack of rheumatic inflammation of the internal parts of the same eye, for which he took bark, soda, colchicum, and mercury, with comparatively little advantage.

On the 1st of July he was directed to take the *Ol. Terebinth.* $\mathfrak{z}\text{i}$. three times a day. It was continued at that dose for three weeks, and removed the pains in the forehead, side of the head, and eye, which were never completely relieved by the other means employed. He lost also, under this treatment, the double vision which he had suffered from since March. The turpentine was continued for three weeks more, twice a day; and occasionally since, when he finds any inconvenience.

The pupil is natural in size, but slightly irregular, adhering to the capsule of the lens; an effect which generally takes place after rheumatic inflammation, when not rapidly cured, rendering it at all times an infinitely more dangerous disease than when the cause is syphilitic or otherwise.

In this case, one of pure rheumatic inflammation of the choroid coat and iris, the turpentine exhibited greater powers than any of the other remedies employed; and the same thing has been observed in other instances of a similar character.

CASE II.—R. H. Hill, æt. twenty-nine years. About four years ago he lost the sight of his left eye from inflammation, over which a broad nebula had spread itself. Before seeing Mr. Guthrie, the eye had been much weakened by two large ulcers. The inflammation of the eye was general, and the edges of the pupil were irregular. Sixteen ounces of blood were taken from the right temple by cupping, and six grains of calomel and a black draught administered. The patient's bowels not yielding, the dose was given for three successive days. Neither the cupping nor medicine appeared to have the slightest effect; for, on the 10th of August, two fresh ulcers had formed immediately upon the edge of the transparent cornea, causing violent inflammation, great tension of the lids, and an intolerance of light.

On the 11th, an effusion of lymph was observed on the edge of the iris. The patient was again cupped to twelve ounces, and a drachm of *Ol. Terebinthinæ* administered three times a day. The cupping produced no effect: on the contrary, the eye was fast getting worse. On the 16th the patient was again cupped, but, as before, without receiving any benefit.

On the 18th, the turpentine, which had been regularly taken, began to affect the kidneys and the whole course of the urethra. Blood was freely voided per urethram; and a distressing scalding sensation was felt down its whole course. Besides these effects of the *Ol. Terebinthinæ*, there were others which are worth remarking. The oil, when taken, produced a warmth in the stomach, which was quickly succeeded by nausea, stupor, and excessive languor and depression of spirits: these symptoms, in their turn, were succeeded by heartburn, and great coldness of the extremities; the patient's sensation was as if the blood of the head and extremities were congregating about the heart.

From the time the turpentine thus affected the patient, his eye became evidently better. The secretion, which had been very great and scalding, now became cool; no pain was felt at the temple, and light was no longer intolerable. On the 22d, the ulcer and inflammation had disappeared; the inflammation of the iris, and effusion of lymph which it had caused, had both vanished. The patient was pronounced to be cured, and permitted to return into the country.

It is stated above that the patient had lost the sight of his left eye: this eye has improved gradually with the other, under the course of turpentine. The mist is not so thick, and appears to be going away.

CASE III.—John Toury, æt. twenty-five, admitted August 6th, 1829, with pustular inflammation, of three weeks' standing. A pustule, of the size of a pin's head, is situated on the inner and lower edge of the cornea; the conjunctiva is greatly inflamed, especially around the pustule; there is great flow of tears; the lids adhere in the morning; iris slightly changed in colour. He complains of a little pain in the eye.—Appl. Unguent. Argent. Nitrat.

August 8th.—The inflammation is a little diminished.—Guttæ Argent. Nit.

9th.—Much worse. The conjunctiva is considerably more inflamed; he complains of great pain over his brow.—Appl. Ung. Argent. Nitrat. Cap. Pulv. Jalapæ comp. ʒiss. statim. Cucurb. cum ferro applicent. ad temp. ad ʒxiv.

13th.—To be cupped from the temples again.

15th.—He feels much worse, and complains of great pain round the orbit, with intolerance of light. The iris is rather darker than natural, and acts irregularly; the inflammation of the conjunctiva amounting almost to chemosis, and the state of the sclerotic coat, therefore, cannot be seen.—R. Vin. Colchici ʒi.; Pulv. Ipecac. comp. gr. x.; Aquæ ʒiss. h. s. s.

16th.—The pain is much diminished, and he can bear the light much better; the vessels of the conjunctiva not quite so much distended as yesterday; the pupil is a little irregular.—Rep. Haust. Colchici h. s.

17th.—He has no pain now, except on exposure to light; the pustule on the margin of the cornea is advancing; the iris remains of a darker colour, and the pupil is of an oval shape.—*Repet. Haust. Colchici h. s. s. Guttæ Vini Opii. Applicatur Emplast. Bellad. temporari.*

18th.—He has no pain whatever in the eye; the vascularity of the conjunctiva is diminished.—*Guttæ Argent. Nitr.*

19th.—The conjunctiva is much more distended, and the pain much increased.—*Rep. Guttæ Opii. Omitte Guttæ Arg. Nitr.*

20th.—He complains still of great pain in the head, which is not so severe as yesterday. The anterior chamber is rather muddy.—*App. Ung. Arg. Nitr.* To be cupped from the temples to twelve ounces.

22d.—The iris is more discoloured and contracted; the turgid state of the conjunctiva much the same. He sees much better, the iris being now principally affected, (not, however, apparently from any venereal disease.)—He was ordered to take *Ol. Terebinth. ʒi. ter die.*

24th.—The conjunctiva is evidently less injected; the iris of a lighter colour; the muddiness of the anterior chamber rather increased, and he does not see so well. He complains of little pain. The pustule has burst, and left a deep ulcer, implicating the lower part of the inner margin of the cornea. The medicine has produced no unpleasant sensation about the urinary organs.—*Repet. Ol. Terebinth. ʒi. ter quotidie.*

25th.—Pain in the head gone; the iris is less discoloured; the anterior chamber rather clearer, and he sees much better.—*Cont. Ol. Terebinth. ʒi. ter die. Capiat. Magnes. Sulph. ʒi. mane.*

29th.—Has taken the medicine regularly since the 25th. The vascularity of the conjunctiva is much diminished, and a zone of a pink colour can now be distinctly seen round the margin of the cornea; the pupil is regular, but contracted, the colour of the iris much the same. His sight improves daily; he has no pain in the head, but complains of slight strangury.—*Cont. Ol. Terebinth. ʒi. ter die.*

September 1st.—The inflammation of the conjunctiva nearly gone; the zone round the cornea is of a much darker colour, and very distinct; the pupil is a little irregular; the ulcer on the margin of the cornea increased in size. He has no strangury.—*Cont. Ol. Terebinth. ʒiss. ter die.*

6th.—Has been confined at home by severe pains of the abdomen, and sickness, on account of which he has not taken the *Ol. Terebinth.* since the 1st. He makes water more frequently, but without scalding; the eye is much improved; the zone less distinct, and of a paler colour; the pupil is rather more dilated, but still a little irregular; the iris is of a lighter colour.—*R. Ol. Terebinth. ʒiss.; Tr. Opii gtt. x.; Mucil. Acaciæ ʒss.; Aquæ ʒvij. M. fiat haustus ter die. Capiat Ol. Ricini mane. Guttæ Argent. Nitr.*

9th.—The pupil rather more irregular; the iris is now of its

natural colour; the sclerotic inflammation nearly disappeared, and the ulcer of the cornea is less. He sees as well as ever he did.—Cont. Ol. Terebinth. zi. ter die. Rep. Guttæ Argent. Nitr.

11th.—The ulcer is filling up. There is still a little vascularity of the sclerotica. He complains of rheumatic pains over his temples and forehead; for which he was ordered Pulv. Ipecac. comp. gr. x. hâc et crastin. nocte. Pil. Colocyath. cum Calomel mane sumend. Omittit Ol. Terebinth.

15th.—The iris is a little darker; the pupil is still contracted, but regular, and the sclerotic is very slightly injected. The ulcer is nearly healed; the rheumatic pains much relieved.—Guttæ Argent. Nitr.

22d.—The ulcer has not quite healed, but he is well in all other respects.—Unguent. Arg. Nitr.

Case reported by Mr. WEIGHT.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, notamus.—PERSIUS.

The Influence of Climate in the Prevention and Cure of Chronic Diseases, more particularly of the Chest and Digestive Organs: comprising an Account of the principal Places resorted to by Invalids in England and the South of Europe; a comparative Estimate of their respective Merits in particular Diseases; and general Directions for Invalids while travelling and residing Abroad. With an Appendix, containing a Series of Tables on Climate. By JAMES CLARK, M.D. Member of the Royal College of Physicians of London; corresponding Member of the Royal Medical Society of Marseilles, of the Medico-Chirurgical Society of Naples, of the Medical and Physical Society of Florence, of the Academy of Sciences of Sienna, &c. &c.—8vo. pp. 328. T. and G. Underwood, London, 1829.

THE author of the present volume has already introduced himself very favorably to the notice of his professional brethren, by a brief, but very excellent, work on the Climate and Medical Institutions of France and Italy, which was published about nine years ago. Since that time he has had ample opportunities of observing the nature of the climate of the south of Europe, and its effects on disease. He has also made himself acquainted with the milder parts of England, with the view of ascertaining their respective merits, and of comparing them with the climates of the south.

The work is divided into two parts. In the first, Dr.

CLARK has endeavoured to determine the general physical character of the milder climates of the south of Europe and of England; to point out the manner in which the climate of different places resorted to by invalids is modified by local circumstances; and to compare these places relatively to their influence on disease. In the second part, an account is given of the principal diseases which are benefited by a mild climate. The importance of consumption and disorders of the digestive organs, their extreme frequency in this country, and the close relation in which they stand to climate as a remedy, have induced Dr. Clark to comment upon them at some length. His inquiries have been directed chiefly to the causes and origin of consumption, with the view of establishing rules for its prevention; and he feels convinced that, by adopting the system of management from early infancy which he has laid down, that a great improvement might be effected in the general health of many among the higher and middle classes of society in this country, and that the children of delicate, and even of diseased parents, might, by proper care, be reared so as to overcome, in a large proportion of cases, their hereditary disposition to disease.

PART I. ON CLIMATE. It cannot be necessary to adduce any formal proofs to show that the influence of climate in the prevention and cure of diseases is, for many reasons, a subject of peculiar interest to the inhabitants of this country. The most careless observer must be aware that some of our most fatal diseases are to be attributed to the inclemency of our seasons, and that many others of great frequency, if they do not derive their origin immediately from our climate, are at least greatly aggravated by it. Change of climate, therefore, as a remedy, is very frequently had recourse to, both with and without the sanction of the physician. That even he sometimes abuses it, we cannot doubt; for we have frequently seen patients labouring under incurable disease, separated from all domestic comfort, and transported, at great expense and equal inconvenience, to a foreign clime, without the most remote possibility of advantage. Invalids who unadvisedly seek to recover health by the same means, not unfrequently rush into every irregularity, both moral and physical, from a ridiculous and too general opinion that, provided they do but change the scene and temperature, they must derive benefit, whatever imprudence they may commit. Upon this important subject Dr. Clark offers some very sensible remarks, which are introductory to his general subject. Neither travelling nor

change of climate, nor the combined influence of both, can produce permanent benefit, unless directed with due regard to the nature of the case, and aided by proper regimen. The patient who goes abroad for the recovery of his health is cautioned not to expect too much from the mere change of climate. The air or climate is often regarded by invalids as possessing some specific power, by virtue of which it directly cures the disease. This is a very erroneous view of the matter, and not unfrequently proves the bane of the invalid, by leading him, in the fulness of his confidence in climate, to neglect other circumstances, an attention to which may be as essential to his recovery as even that in which all his hopes are placed. If the patient wishes to reap the full measure of good which his new position may place within his reach, he must trust more to himself, and to his own conduct, than to the simple influence of climate, however genial.

ENGLAND. Before travelling beyond sea in search of a climate that may prove beneficial to his disease, the invalid will, or ought to, inquire what resources the limits of our own island afford. Dr. Clark believes that England possesses advantages which have not been made so fully available in this way as they might have been; and that many invalids, for want of discrimination in applying the proper climates to the diseases to which they are most suited, have gone abroad in search of that which they might have found almost at their own doors. We admit the truth of this observation; but it must be remembered that the novelty of the scene which is presented in a foreign country to an untraveller Englishman produces an agreeable mental excitement, which is very frequently productive of the best effects upon the corporeal malady, and which is altogether independent of mere change of climate. We have known many invalids, who have suffered more perhaps from exhaustion of mind arising from close application to worldly affairs at home than from bodily disease, who have in vain visited some of the most delightful and salubrious parts of their own country, but have been quickly restored by a trip to foreign parts.

London. The mean annual temperature of our metropolis is $50^{\circ} 39$, being one and a half degree above that of the environs, with the exception perhaps of the warmer parts of Brompton and Chelsea, which are peculiarly sheltered.

"This difference of temperature between the metropolis and surrounding country, as the physician ought to know, is very unequally distributed throughout the year and throughout the day.

The excess of the city temperature arrives at its maximum in January, at which time it exceeds that of the environs by three degrees; but the difference throughout the whole of the winter is less than it is in the summer. In the spring months, the temperature of the environs becomes nearly equal to that of London, and in the month of May it rather exceeds it." (P. 18.)

South Coast of England. The minimum temperature observed on the south coast is, generally, from three to four degrees above the minimum temperature of London. Nor is the temperature of the south coast subject to the same extent of range as that of London and the interior.

"In steadiness of climate, as deduced from the variation of temperature between successive days, the south coast does not appear to possess any very remarkable superiority over London itself. Of the places on this tract of coast which have been particularly examined, Southampton is the most variable in its temperature, equalling in this respect the environs of London." (P. 22.)

A greater quantity of rain falls on the south coast than at London, the ratio being, as nearly as could be ascertained, as thirty to twenty-five. The general character of the climate of this district is "humid and heavy," and many parts of it are subject to aguish complaints. Chichester the author considers the best winter residence for that class of invalids likely to be benefited by a climate of this kind.

Hastings, from its low situation, and the height of the neighbouring cliffs, is protected in a considerable degree from the north and north-easterly winds. "One of the principal disadvantages of Hastings is its confined situation, by which its climate is limited to a small local extent, owing to the close manner in which it is hemmed in on the sea by the steep and high cliffs which rise immediately behind it." In autumn, and even December, the climate of Brighton is warmer and more steady than that of Hastings. According to the experience of Dr. Clark, the latter place is unfavorable in nervous complaints, to persons subject to headach, and to languid or relaxed habits. For those who have suffered from ague, Hastings is a doubtful residence.

Brighton. Here the climate is, in respect of closeness, the reverse of Hastings. It is dry, elastic, and bracing, and, to persons of nervous or relaxed habits who can bear cold winds, it is much more congenial. The most favorable season of the year at Brighton is the autumn and beginning of winter. The early part of the spring is the worst season.

Isle of Wight.—The only part of this island well adapted for the winter residence of invalids is *Undercliff*. In this

district the scenery is splendid; there are no moist or impure exhalations, and it is completely sheltered from the north, north-east, north-west, and west winds. Snow is rarely seen, and frosts are but partially felt.

"The mildness of the climate, the dry nature of the soil of Undercliff, and the extent to which it is sheltered from cold winds, by affording ample space for exercise, are great advantages to invalids threatened with pulmonary disease, or others to whom exercise in the open air, in a mild climate, is desirable. In this respect it is probably superior to any place in this line of coast. The principal objections to it as a residence for invalids, are the scantiness of accommodations, and its distance from medical advice. On this account it is, perhaps, at present rather calculated for the retreat of the valetudinarian, who does not stand in need of much medical attendance, than for the real invalid." (P. 29.)

South-western Coast. The south coast of Devon, the warmest part of this district, has a winter temperature nearly two degrees higher than that of the coast of Sussex and Hampshire, and from three to four warmer than that of London.

"During the months of November, December, and January, the difference is most remarkable; amounting on the average, in the sheltered places, to five degrees above London. In February, the difference falls to three degrees; and, in March and April, the excess of the mean temperature over that of London does not amount to one degree. It ought also to be remarked that this difference takes place principally in the night; as the difference between the lower extremes of London and the south-west coast is to the difference of the higher extremes as four to three; a less disproportion, however, than occurs between the south coast and London. Hence, when compared with the latter, the days are proportionally warmer on the south-western than on the southern coast; whilst the nights at both places are nearly equal." (P. 30.)

Torquay. The general character of the climate of this coast is soft and humid. It is remarkably protected from north-east winds, and also from the north-west.

Of the places on this coast frequented by invalids, *Dawlish* perhaps deserves the preference after Torquay. *Exmouth* is well sheltered, but exposed to damp and fogs.

Sidmouth possesses little of the characteristic qualities of this climate. It is inferior to all the other places as a winter or spring residence. As a watering place in summer or autumn, it may be agreeable.

"The climate of the coast of Devonshire is found very beneficial in various forms of disease. I have known it serviceable in chronic affections of the throat, trachea, and bronchia, proceeding from irritation, or a low degree of inflammation of these parts, and

attended with a dry cough, or with little expectoration; likewise in an irritable or morbidly sensitive state of the stomach, and in hypochondriacal affections, the consequence of such a state. In dysmenorrhœa, and all nervous sympathetic affections dependent on that disorder; in a highly sensitive state of the nervous system, and in most diseases of general irritation, advantage may be expected from this climate. On the other hand, it certainly exerts an unfavorable influence on nervous headaches, and on all nervous complaints arising from relaxation or want of tone of the nervous system; it is injurious also in pure dyspepsia, when the tone and sensibility of the stomach are below par, as indicated by pale lips, a pale clammy state of the tongue, and languid circulation; and it will be found no less unfavorable in menorrhagia, leucorrhœa, and all diseases accompanied with much general relaxation of the system, or with much discharge from the affected organs." (P. 34.)

What may be the real estimation in which the climate ought to be held in consumptive complaints, Dr. C. has much difficulty in saying. But, as the invalid will be exposed to less rigorous cold, and for a shorter season will have more fine weather, and consequently more exercise in the open air, he gives himself a better chance by passing the winter here, than he could have in any more northern part of our island.

Cornwall. There are several places on the north and south coasts of the extended Cornish peninsula that deserve attention; but the imperfection of our meteorological data greatly circumscribe our investigations. The only places, therefore, of which the author is enabled to speak with some confidence, are one or two near the south-west extremity of the peninsula.

Penzance can hardly be said to be sheltered from any wind. The climate here is peculiar, and unlike any other which Dr. C. has met with. The mean annual temperature is only $1^{\circ}.77$ above that of London. "But this temperature is very differently distributed over the year at the two places. Although Penzance is only a degree and a half warmer than London for the whole year, it is $5\frac{1}{2}^{\circ}$ warmer in winter. It is 2° colder in summer; scarcely 1° warmer in spring; and only about $2\frac{1}{2}^{\circ}$ warmer in the autumn." Penzance is, on an average, nearly $6\frac{1}{2}^{\circ}$ warmer than London during the night in winter, and little more than 3° warmer during the day. For equality of temperature throughout the day or year, Madeira is the only climate the author has examined which is superior to Penzance. In the spring this latter place loses its superiority of climate.

"In the other elements of climate, this district has less peculiar advantages. There falls at Penzance nearly twice as much rain as at London, the annual average at the former place being forty-four, and at the latter only twenty-five inches. We have reason to believe also that the number of days in which rain falls is greater at Penzance than at London, although this is not the result of Mr. Giddy's observations, as given in his tables." (P. 42.)

Another disadvantage of the climate of the south-western extremity of our island, is its liability to violent and frequent storms of wind; and of this disadvantage Penzance appears to partake largely.

The general qualities of *Falmouth* are nearly the same as those of Penzance.

"With respect to the effects of the climate of the Land's-end on disease, the disadvantages which attach to it generally, in point of humidity and exposure to winds, are such as in a great measure to neutralize the superiority which it possesses over the other climates of England in mildness and equability of temperature. In its general characters, this climate resembles so closely that of the south coast of Devonshire, that the remarks formerly made on the influence of the latter on disease apply nearly to it. Regarding its influence on consumption, we have the testimony of Dr. Forbes, founded on ample experience, that little is to be expected from it; but we ought to admit, at the same time, that in this respect it but shares the opprobrium with every other climate, in the advanced stages of that disease." (P. 47.)

Dr. FORBES states that, in many cases of chronic bronchitis, simulating phthisis, the health was greatly improved, and in some completely restored, from a state of great debility and seeming danger, by a residence at Penzance.

"The consumptive cases in which the soft humid atmosphere of this place is likely to prove beneficial, are those in which the disease is accompanied with an irritated state of the mucous membrane of the lungs, producing a dry cough, or one with little expectoration.

"In idiopathic tracheal and bronchial diseases of the same character, whether complicated with asthma or otherwise, and also in certain pure cases of the latter disease, it is likely to be very beneficial. When, on the contrary, there exists a relaxed state of the general system, or a disposition to copious secretion from the bronchial membrane, whether idiopathic or symptomatic of a tuberculous state of the lungs, or where hæmoptysis has occurred, I believe the climate of the Land's-end will generally prove injurious." (P. 48.)

West of England.

"The mean temperature of the western group of climates during the winter, is rather lower than that of the southern coast, but in

March and April rises rather above it. The mean annual temperature of Cheltenham appears to be about one degree warmer than London; its winter, spring, and summer, from one to two degrees warmer; but its autumn somewhat colder. Bath and Bristol, during the months of November and December, are nearly three degrees warmer than London. In January and February they do not average one degree warmer. In March, Bath and Cheltenham are rather colder than London; but Bristol continues from one to two degrees warmer during March, as well as April." (P. 51.)

On comparing Penzance with this tract, we find only one degree of difference in the mean annual temperature: in winter, however, Penzance is four degrees warmer; but in the spring and summer it is somewhat colder. In steadiness of temperature from day to day, this district offers very little advantage over London. "Great Britain," says Dr. Chisholm, "presents almost the extreme of irregularity in her climate; and probably the western counties are the most distinguished for that versatility, that capriciousness of temperature, so peculiar to the whole of England."* In this tract of country, Bristol and Clifton appear to afford the most eligible winter and spring residence for invalids. At the bottom of the hill, in the neighbourhood of the Bristol Hotwells, the most sheltered situations are to be found. One advantage it possesses over even the boasted coast of Devonshire, being free from dampness and mizzling rains. Dr. Chisholm is of opinion that the subincumbent limestone contributes much to the salubrity of the atmosphere. The absence of every thing like marsh must certainly contribute greatly to the purity and wholesomeness of the Clifton air.

"From all these testimonies in favor of the climate of the more sheltered parts about Bristol and Clifton, there appears sufficient evidence of this spot being the mildest winter, and more especially spring, residence in the west of England. This results also from its sheltered situation, and the evidence afforded by our meteorological registers, which, we have seen, make Bristol warmer than the south coast, and equalling that of Devonshire during the spring months. This country affords also a good summer climate; so that for invalids to whom the air of this district is suitable, it presents altogether one of the best residences throughout the whole year in our island." (P. 55.)

Having given an account of the warmer situations in England, Dr. C. proceeds to point out what are the advantages they offer generally to invalids, and what are the

* On the Statistical Pathology of Bristol and Clifton, by the late Dr. CHISHOLM. (Edinb. Med. and Surg. Journal, vol. xiii. 1817.)

diseases in which they are respectively beneficial. The whole of these places are considerably warmer during the winter and spring than England generally, and much warmer than the colder parts of it.

“ But it must be kept in mind that, as has been before observed, there are other circumstances connected with the adaptation of climate to disease, which require attention as well as temperature. The particular nature of the disease and of the patient's constitution, and the character of the climate most suitable for these, will naturally be the first objects of the physician's consideration; but the nature of the climate in which the invalid has lived ought also to be taken into account. This last circumstance, namely, the comparative influence of any particular climate on different individuals, depending on the nature of that which they previously inhabited, has not, I believe, been sufficiently attended to. It deserves, however, the especial consideration of physicians when selecting a climate for their patients.” (P. 58.)

For example, an inhabitant of one of the coldest parts of our island would feel the influence of the climate of the south-west of England (as far, at least, as regards temperature,) as much as an inhabitant of the latter would that of the south of Europe. It is, with few exceptions only, as a means of preventing the occurrence of tubercular disease in the lungs, when threatened, or of checking its progress in its early stages, that much benefit can be expected from any climate.

“ In diseases depending upon, or connected with, much general or local irritation; in chronic inflammatory affections of the throat, trachea, and bronchia, accompanied with little secretion or expectoration; in indigestion, arising from a heated and irritated state of the stomach, and in the nervous and hypochondriacal affections originating in such a state; in dysmenorrhœa, and in dry irritable cutaneous diseases, the coast of Devonshire affords the most favorable winter climate. In cases of the kind referred to, in which it is desirable that the invalid should remain stationary during the whole year, the Land's-end would perhaps be preferable to the coast of Devon.” (P. 59.)

In chronic diseases of the trachea and bronchia, attended with copious expectoration and dyspnoea; in dyspeptic disorders of a more purely nervous character, with a relaxed system, or a tendency to mucous or sanguineous discharges, the climates of the south-west of England and the Land's-end are unfavorable. For such cases, perhaps, Brighton will be found the “ most favorable residence during the autumn and early part of the winter.” The latter part of the winter, and still more the spring, at

Brighton is cold, as it is unprotected from the north-east winds.

FRANCE. The south of France has been long held in estimation for the mildness of its climate; and various parts of it, says the author,

"have been, and are still, annually resorted to by invalids from this country; although, I fear, without much discrimination, either as regards the qualities of the climate, or the nature of the diseases in which this is most likely to prove beneficial.

"The climate of the southern provinces of France admit of being classed under two divisions, namely, the south-eastern and south-western. These two regions differ essentially from each other in the physical characters of their climates: the latter resembles in its general qualities the south-western parts of England, the former is of a totally different nature. In their influence on disease, they differ also in a very remarkable manner; and unless the distinctive characters of each in this respect be kept in view by the physician, in selecting a residence in this country for invalids, great errors must be committed." (P. 63.)

The West and South-west of France. Under this title Dr. C. includes the whole tract of country from Brittany to Bayonne, comprising L'Orient, Nantes, La Rochelle, Bourdeaux, Montauban, Pau, and Toulouse. The climate of this part of France is directly opposed in its qualities to that of the south-east of France.

"Though, on the whole, less warm than the latter, its temperature is more equal, and the range of this less extensive, as well through the whole year, as through the period of day and night. It is, however, more changeable from day to day, and the changes themselves are very considerable. The mean annual temperature of the south-west of France generally, is about fifty-five degrees. This makes it six degrees higher than England generally, and four degrees higher than the south-west of England; but three degrees below the south-east of France, and four degrees below Italy. The days are not so fine as in the south-eastern parts of the kingdom, but the nights are not so cold in relation to the days. The climate may be characterized as soft, relaxing, and rather wet. Hence it is suitable for complaints to which the south-east of France is injurious, particularly gastric dyspepsia, (or dyspepsia depending on an inflammatory state of the stomach,) and the dry bronchial irritations. In that class of consumptive patients, therefore, in whom the disease is complicated with either or both of these affections, and in whom, consequently, there is a great susceptibility to the influence of dry, keen winds, this climate will generally agree. Laennec found the southern coast of Brittany very favorable to consumptive patients; and he also observed that the proportion of consumptive diseases in this part of France was comparatively small." (P. 64.)

- “Generally speaking, the climate of the south-west of France will be useful in chronic inflammatory affections of the mucous membranes accompanied with little secretion, as in chronic bronchitis not attended by much expectoration, or difficulty of breathing, and in similar morbid states of the larynx and trachea. It will be equally proper in dry scaly eruptions of the skin; in dysmenorrhœa; in certain kinds of headach, especially those induced or exasperated by sharp north-east winds; and in high morbid sensibility in general, when accompanied with that habit of body which the ancients called *strictum*. On the other hand, the same diseases occurring in relaxed habits in which there is a disposition to copious secretion, will be increased by this climate. Those who do not find inconvenience from the south-west winds of Devonshire will find the climate agreeable.” (P. 65.)

Pau is the only place in this district of which it is considered necessary to give a particular account. It is upon the whole healthy. “Scrofula is rare, and consumption not a common disease.” The mildness of the spring, and its little liability to winds, render this place favorable to chronic affections of the larynx, trachea, and bronchia. “In gastritic dyspepsia, also, Dr. Playfair has found it beneficial; and he has seen it useful in a few cases of asthma.” Upon the whole, *Pau* appears to be one of the most desirable winter residences in the south-west of France for invalids labouring under chronic affections of the mucous membranes.

“Invalids labouring under, or liable to, attacks of rheumatism, should of course avoid *Pau*. In bronchial diseases, also, when accompanied with much general relaxation of the system, and with copious expectoration and dyspnœa, the climate will not in general prove beneficial; and Dr. Playfair considers it too changeable in consumptive diseases.” (P. 72.)

Invalids who mean to winter at *Pau* should arrive there in the end of September, or early in October.

South-east of France. Various places in this district have been recommended as a good winter climate for consumptive patients,

“but nothing can be more unaccountable than how such an advice ever came to be given; as the experience of later years is in complete opposition to it, and the general and leading characters of the climate show that there never was the least reason to sanction it. That the country which has always been infested by the terrible *Circius* should have been chosen for the residence of the delicate and sensitive sufferer from pulmonary disease, is a striking proof of the very loose observations upon which medical opinions respecting climate have been formed. How this practice of send-

ing consumptive invalids to the south-east of France originated, it is not of importance to inquire: that it is founded on error, I think I shall be able to prove, by a reference to the physical characters of the climate, the actual prevalence of consumption among the inhabitants, and, I may add, the total want of success which has attended the measure." (P. 73.)

The mean annual temperature of Provence generally is 58°. Dryness is one of the most remarkable characters of its climate.

"The general character of the climate of the south-east of France, therefore, is dry, hot, harsh, and irritating. Absolutely warmer than our own island and the south-western parts of France, its temperature is distributed through the year and through the day with great irregularity. It has a much wider range of temperature than our own climate; this being, when compared to that of England, as three to one for the year, and as two to one for the day. Sometimes the winter is very rigorous." (P. 75.)

The temperature is steadier than our own from day to day, but its changes, though less frequent, are more sudden and extensive.

"Although decidedly improper for consumptive patients, and for those labouring under irritation of the mucous membranes of the digestive or pulmonary organs, more especially irritation of the stomach, larynx, or trachea, this climate may prove useful to invalids of a different class. On persons of a torpid or relaxed habit of body, and of a gloomy, desponding cast of mind, with whom a moist relaxing atmosphere disagrees, the keen, bracing, dry air of Provence, and its brilliant skies, will often produce a beneficial effect. In some cases of chronic intermittent fevers, also, it proves very favorable." (P. 76.)

Montpelier. The climate of this place little deserves the reputation which it still enjoys as a residence for the consumptive. Phthisis is here a very common and a very fatal disease among the inhabitants: whole families are frequently destroyed by it.

Marseilles "is but little entitled to claim any exception from the general character of the climate of Provence." It is dry, variable, and subject to cold irritating winds, which are peculiarly injurious to consumptive patients. Marseilles is one of the towns in France in which phthisis is most prevalent. "Invalids requiring a dry climate, and capable of bearing keen, cold winds, will be benefited by a residence at Marseilles: patients labouring under intermittent fevers often get rid of them without medicine, on coming to this place." (P. 79.)

Aix cannot be recommended as a winter residence for the consumptive.

Hyeres is agreeably situated near the shores of the Mediterranean, "and is the least exceptionable residence for the pulmonary invalid in Provence."

Nice is nine degrees warmer in its mean annual temperature than London. "The range of temperature for the day is also less at *Nice* than at any part of the south of Europe; and in steadiness of temperature it ranks next to *Madeira*." During March and April, sharp easterly winds prevail here. The proportions of deaths in the hospital from consumption is said to be about one seventh of the whole mortality.

"When this disease (consumption) is complicated with an inflammatory or highly irritable state of the mucous membranes of the larynx, trachea, or bronchia, or of the stomach, *Nice* is decidedly an unfavorable climate; and, without extreme care on the part of such patients, and a very strict regimen, the complaint will in all probability be aggravated by a residence here. Indeed, the cases of consumption which ought to be sent to *Nice* are of rare occurrence. If there are any such, it is when the disease exists in torpid habits, of little susceptibility, or not much disposed to irritation; and when it is free from the complications which have been just mentioned. Even the propriety of selecting *Nice* as a residence for persons merely threatened with consumption, will depend much upon the constitution of the individual." (P. 89.)

Young persons threatened with phthisis have sometimes been benefited by residing here for one or two winters. In chronic bronchial diseases very salutary effects are produced by a residence at this place.

"The particular kind of bronchial disease most benefited by a residence at *Nice*, is that accompanied with copious expectoration, whether complicated with asthma (*humoral asthma*) or otherwise; and in the chronic catarrh of aged people it is particularly beneficial. This variety of bronchial disease is directly the reverse of that which is benefited by the south-west of France and of England; and I think it important here to remark, that, unless the distinctions which I have pointed out in bronchial diseases, and their complications, are attended to, great errors must be committed in selecting a residence for such patients." (P. 91.)

In most cases, the gouty invalid may here escape his usual winter attack, and perhaps return to his own country with improved health. In chronic rheumatism, scrofulous complaints, dyspepsia, and hypochondriasis, *Nice* is beneficial. But here, again, distinction is necessary.

"The cases of dyspepsia most benefited are those accompanied

with a torpid, relaxed state of the system, with little epigastric tenderness, or any of those symptoms which denote an inflamed or very irritable state of the mucous membrane of the stomach. Where the latter state is the cause of the dyspeptic symptoms, Nice will decidedly disagree: indeed, as I have already observed, a degree of this affection is also endemic there." (P. 92.)

Where there is great relaxation and torpor of the constitution, the climate of Nice is extremely useful. It may be considered generally as "warm, exhilarating, and exciting, but, upon the whole, irritating; at least, to highly sensitive constitutions."

Villa Franca is more protected than Nice from the north and north-west winds, but it is open to the whole range of easterly winds, which are the most prevalent of the spring winds, and the most injurious to the invalid. Here there are but few accommodations for patients.

ITALY possesses great diversity of climate, but Dr. Clark's observations are limited to that tract which is situated between the northern shores of the Mediterranean and the southern base of the Apennines.

"The climate which prevails over the whole of this region, while it exhibits a great similarity of character, differs in several respects from any of the climates already noticed: it is considerably warmer and less humid, but subject to a greater range of temperature, than that of the south-west of France; it is softer, less dry, and less harsh and irritating than that of Provence; suffering more from the heavy oppressive winds of the south, and less from the dry searching winds of the north." (P. 97.)

Genoa "is an unsuitable residence for invalids generally, nor is there much in the character of the climate to recommend it." The distribution of heat throughout the year is unequal, and the temperature by no means steady from day to day. "The climate is on the whole dry and healthy, but not suitable to delicate sensitive invalids. It is more congenial to relaxed, phlegmatic habits." For pulmonary affections *Genoa* is an improper residence: tubercular consumption is prevalent.

Florence, "though one of the most agreeable residences in Italy, is far from being a favorable climate for invalids, and least of all for those disposed to consumption." Fogs are more common here than at most parts of southern Italy. The winter is four degrees warmer than London, and nearly of the same temperature as at Penzance. Dr. Clark does not know any class of invalids for whom *Florence* offers an advisable residence.

"My own opinion, founded partly on observation, and partly

on the reports of invalids, perfectly accords with that of Dr. Seymour, of London, and Dr. Down, of Southampton, whose more extensive opportunities of observation during a long residence and extensive practice at Florence make their testimony of greater value." (P. 101.)

It is one of the places in Italy which agrees least with children.

Pisa has long had the reputation of being one of the mildest and most favorable climates in Italy for consumptive patients. In winter it is seven degrees warmer than London, and two warmer than Penzance. In spring it is eight degrees warmer than London, and about seven warmer than Penzance. The range of temperature between day and night is very considerable.

"For invalids who are almost confined to the house, or whose power of taking exercise is much limited, *Pisa* offers advantages over either Rome or Nice: the Lung' Arno affords a warm site for their residence, as well as a sheltered terrace for their walks. But they must be careful to confine themselves to it; they should not venture into the cross streets before April." (P. 103.)

Cataract and ophthalmia are common, but this is the case over the whole southern parts of Italy. Calculous diseases are so rare that VACCA, during thirty-two years he had been operating on such patients from all parts of Italy has not had occasion to operate on one at Pisan.

Naples in climate resembles Nice. It is unfit for consumptive patients.

"*Naples* is, however, well suited as a winter residence for those who are labouring under general debility and derangement of the constitution without any marked local disease. The beauty of its situation, the brilliancy of its skies, and the interest excited by the surrounding scenery, render it a very desirable and very delightful winter residence for those who rather require mental amusement and recreation for the restoration of their general health, than medical treatment for any particular disease." (P. 105.)

Rome has a mild and soft, but rather relaxing and oppressive, climate. Its mean annual temperature is ten degrees higher than that of London. One peculiarity of it is the stillness of the atmosphere; and this quality of calmness is valuable in a winter climate for pulmonary diseases; more especially for diseases of the larynx, trachea, and bronchia. Among the more prevalent diseases of Rome, *malaria* fevers are the most remarkable; and upon this very important subject Dr. Clark offers many remarks, which the traveller will do well to attend to. He considers the ma-

laria fevers of Rome to be of exactly the same nature, both in their origin and general characters, as the fevers which are so common in the fens of Lincolnshire and Essex, in Holland, and probably in certain districts over the whole globe.

"Though the term malaria, which was for a certain time restricted to the fevers of Rome, but which has now become almost a generic name for these diseases, has given rise to some confusion on the subject, even among medical men; the form and aspect under which these fevers appear, may differ according to the concentration of the cause, or to some peculiar circumstances in the nature of the climate or season in which they occur; but it is the same disease, from the fens of Lincolnshire and the swamps of Walcheren, to the pestilential shores of Africa; only increased in severity, *cæteris paribus*, as the temperature of the climate increases. In England and in Holland, these fevers generally appear in the simple intermitting form; often, but more rarely, in the remitting form; and they are, for the most part, easy of cure. In France, especially towards the south, the same fevers often assume a more formidable character. Those which, from their unusual severity, and the peculiar character of their symptoms, have received the name of *pernicious*, are by no means uncommon in the south-west of France; and in the rice districts of Lombardy, they are met with in all their varieties, and with a degree of severity perhaps equal to the more aggravated forms of the malaria fevers of Rome." (P. 112.)

These fevers have generally been attributed to the direct action of something exhaled from the soil: but of the nature of this agent we are quite ignorant, and its existence is even doubted by many. At Rome, malaria fever seldom appears before July, and ceases about October. "An idea prevails that full living and a liberal allowance of wine are necessary to preserve health in situations subject to malaria." This is an erroneous opinion. Dr. Clark has known many persons suffer in Italy from acting on it. The same stimulating diet which might be borne, and even prove useful, in the damp chilly atmosphere of Holland, is not suited to the exciting climate of Italy.

"Among the diseases benefited by a residence at Rome, I may rank Consumption. In the early stages of this affection, I have generally found the climate favorable. I have frequently known patients who had left England labouring under symptoms that gave much and just alarm, (such as cough, expectoration, &c.,) which continued during the whole journey, and entirely disappeared after a short residence in Rome. The same persons have remained comparatively free from all bad symptoms during the whole season; and this when, from the ultimate result of the case, there could be little or no doubt of the existence of tubercles in the

lungs at the time. In the advanced periods of consumption, I cannot say that the climate proved of any benefit, the disease generally proceeding in the usual course, and perhaps even more rapidly (especially during the spring months) than it would have done in England. In some cases the disease was increased in a remarkable manner during the journey to Italy." (P. 128.)

The climate of Rome is generally beneficial in bronchial diseases; but, if the disease is accompanied with copious expectoration, and is without much gastric irritation, Nice is to be preferred. October is the period at which the invalid should arrive at Rome.

OF A SUMMER RESIDENCE. As a general rule, the summer climate of Italy will disagree with all invalids labouring under general debility and relaxation of the system, or an irritable state of the mucous membranes, or who are disposed to diseases of the nervous system; and when symptomatic fever, with morning perspiration, has shown itself, this, the author considers, will afford a still stronger reason against a summer residence south of the Alps, whatever may be the disease.

In the vicinity of Naples are several beautiful situations, much preferable to the town itself as summer residences. "The *Vomero* and the *Capo di Monte* afford some good stations close to the city; and, of the more distant ones, *Sorrento* and *Castlemare* are the best." The island of *Ischia* is also resorted to as a summer residence, and it may deserve a preference by some individuals, on account of its mineral waters. The baths of this place are very useful in chronic rheumatism, chronic affections of the periosteum, in the cachexia of pseudo-syphilis, in local paralytic affections, and in obstinate cutaneous diseases.

Sienna is an unfavorable climate at all seasons for persons disposed to, or labouring under, pulmonary disease. For nervous, relaxed people, it forms a better summer residence than either Naples or the baths of Lucca.

Switzerland. As a summer residence,

"Switzerland, in point of convenience, certainly affords one very eligible; but much caution and prudence are required on the part of invalids labouring under pulmonary affections who remain there. The alternations of temperature in Switzerland are often very rapid and very considerable. The difference between the day and night is great, and there is often a sharpness in the air which proves irritating to sensitive invalids." (P. 144.)

The borders of the lake of Geneva afford, the author believes, the best situations for a summer residence in Switzerland; and the neighbourhood of Geneva is altogether the least exceptionable.

"For the consumptive invalid, whose symptoms already indicate a tuberculous state of the lungs, and to whom it is of the utmost importance to avoid congestion of these organs and irritation and inflammation of their mucous surfaces, no part of Switzerland affords, I believe, a very favorable climate." (P. 146.)

"The subjects of pulmonary affections, who have spent the summer in Switzerland, will do well to try the '*cure de raisins*.' Of the salutary effects of ripe grapes, taken in considerable quantity for some time, there can be no question. In irritation of the mucous membrane of the lungs and digestive organs; and in congestive states of the abdominal viscera, with a disposition to hemorrhoids, ripe grapes taken for some weeks in the quantity of several pounds a day, with a light diet and abstinence from wine and every thing exciting, will often prove very beneficial. On this subject the invalid will, of course, be directed by a physician on the spot." (P. 148.)

In closing his remarks on the choice of a summer residence, Dr. Clark particularly directs our attention to certain cautions which the invalid should not fail to bear in mind. Unless a journey in hot weather is conducted with great circumspection, the irritation and excitement arising from it in susceptible systems (especially where any organ is in a state of chronic inflammation, however slight in degree,) will do more mischief than any advantage that can be derived from a short residence in the best climate, or from the use of the most valuable mineral waters.

Madeira "has been long held in high estimation for the mildness and equability of its climate, and we shall find on comparing this with the climates of the most favored situations on the continent of Europe, that its character is well founded." It is almost free from keen cold winds, and enjoys a general steadiness of weather to which the best climates on the continent of Europe are strangers. Fog is never seen. This island is almost exempt from the diseases peculiar to warm climates, and little subject to many of those which are common in more northerly countries. "With respect to the prevalence of consumption among the natives of Madeira, there is a difference of opinion among those who have had the best opportunities of observing." Experience shows that *confirmed* consumption is not benefited by a residence at Madeira; but "the effects of the climate on incipient cases, and those threatened with the disease from hereditary or acquired predisposition, are highly encouraging, and should lead medical men to recommend such a measure at the only time when it promises benefit." Invalids who intend to pass the winter in Madeira should leave this country in the end of September, or the

beginning of October. The beginning of June is sufficiently early to leave the island to return to England.

In the second part of the work, the author first states the degree of benefit to be expected from climate in various diseases, and gives some excellent directions and cautions to travelling invalids. Disorders of the digestive organs and consumption are next commented upon, and the particular cases pointed out which are most likely to be relieved by change of climate. In chronic diseases of the larynx, trachea, and bronchia, if proper discrimination be exerted, much benefit may be expected from change of air and climate.

"Before the patient leaves his home, we ought to be assured that all acute and even subacute inflammation has ceased, or otherwise such a measure is more likely to increase than to diminish the disease. This is well exemplified in the effects of change of air in common catarrhal affections. A journey in the commencement of a cold generally increases it: if, on the contrary, the acute period of the cold has passed by, a short journey is one of the most effectual means of removing the cough entirely; and the same thing has been long observed in whooping cough." (P. 278.)

In conclusion, Dr. Clark makes a few brief remarks upon asthma, gout, and chronic rheumatism, which are chiefly in reference to the immediate purpose of his work.

A series of very useful and comprehensive meteorological tables is contained in the Appendix.

It would be impossible to select a subject upon which more erroneous opinions have been formed, both by the public and the profession, than that respecting the influence of the climate in different places, both at home and abroad, over the progress of various diseases. But few persons, comparatively, have had personal experience of the advantages which particular situations offer to the invalid; and, until the publication of Dr. Clark's work, the untraveller inquirer would have sought in vain for a general and trustworthy guide. The physician will find this work of the greatest utility to him as a book of reference: it will enable him to direct others with judgment, and the invalid who ventures out of medical leading-strings may confidently rely upon the information and impartiality of Dr. Clark. He is not a resident practitioner at either of the places he recommends, and therefore *his* book cannot be looked upon as a mere invitation to entice patients within his own focus.

On a Morbid Affection of Infancy, arising from Circumstances of Exhaustion, but resembling Hydrencephalus. By MARSHALL HALL, M.D. F.R.S.E. &c. &c.—8vo. pp. 40. Seeley, London, 1829.

UPON several occasions we have declared it to be our opinion that one of the most serious and most frequent practical errors of the present day, is the readiness with which many practitioners assume the existence of cerebral disease, and particularly of "water in the head," from the occurrence of various symptoms during infancy, which are by no means necessarily connected with any affection of the brain. The brief, but valuable, little Essay before us contains additional proofs of the danger that frequently exists of mistaking other, and very different, diseases of infants for hodrencephalus, and of consequently instituting a very improper, and probably destructive, mode of practice.

Dr. HALL has watched with peculiar care many cases of a morbid affection incident to infancy, which generally arises from circumstances of exhaustion, but resembles, in many of its symptoms, the earlier, and especially the later, stages of hydrencephalus; and, as this affection has not been noticed by practical writers as it deserves, he thinks the present brief account of it cannot prove uninteresting to the profession.

Dr. Hall first gave a cursory sketch of this morbid affection in his "Medical Essays," published in 1825, but which work is now out of print. It has since been briefly noticed by Dr. ABERCROMBIE, in his "Researches on Diseases of the Brain and Spinal Cord." Dr. GOOCH has also treated of this affection, in his recent "Account of some Diseases peculiar to Women:" and these are all the notices he has seen of this singular and interesting disorder.

Those diseases of children are best understood which arise from irritation in the stomach and bowels, and the irritation of teething and inflammation.

"But there is another source of disorder in infancy, less frequent perhaps in its operation, but not less important in its consequences, and far less understood by medical men, in exhaustion. This exhaustion has its origin in early infancy, chiefly in diarrhœa or catharsis; in the later periods of infancy, in the loss of blood, with or without the relaxed or evacuated condition of the bowels.

"The state of diarrhœa has generally depended upon improper food. It has very frequently succeeded to weaning, or to other changes in the diet. The catharsis has followed the administration of an aperient medicine, which, at such a moment of disorder of the stomach and bowels, is apt to act excessively. The ex-

haustion from loss of blood generally follows the inappropriate or undue application of leeches, or the use of the lancet.

"I may observe, indeed, in this place, that of the whole number of fatal cases of disease in infancy, a great proportion occur from this inappropriate or undue application of exhausting remedies. This observation may have a salutary effect in checking the ardor of many young practitioners, who are apt to think that, if they have only bled and purged, and given calomel enough, they have done their duty; when, in fact, in subduing a former, they have excited a new disease, which they have not understood, and which has led to the fatal result.

"This question, and that of the effects of exhaustion in infants and children, open a new field for investigation. Almost all our works on infantile diseases are silent on the subject; and yet, without an accurate knowledge of it, I regard it as totally impossible that we should be prepared to watch and treat the morbid affections of this young and tender age. The subject must be taken up and investigated anew. All the affections which may arise from exhaustion must be accurately observed, distinguished from similar affections arising from other causes, and traced back to their origin, and forward in relation to their remedies. In this manner some hydropcephaloid, convulsive, and even croupy affections, will be viewed in a new aspect; and we shall be preserved from some painful dilemmas into which we should assuredly fall without this knowledge of the effects of exhaustion." (P. 6.)

As in this essay Dr. Hall proposes to confine his observations to one of the forms of disorder which arise from this cause, the hydropcephaloid, it is not for us to travel out of the subject. We may just observe, however, in reference to the last passage in the above extract, that we have elsewhere laid especial stress upon the frequent occurrence of convulsive affections in infants, from various debilitating causes, and, amongst others, the excessive action of purgative medicines. We may, perhaps, venture to give the following passage: "There are doubtless cases in which it may be necessary for us to act freely and frequently upon the bowels of children. Let us, however, beware that we do not commit the common, but important, error of considering the general irritability which is induced by purgatives when long employed, as a state which demands their still further use, or of regarding the unusual appearance of the stools, which is dependent entirely upon their action, as a proof that the stomach and bowels are yet in a state of derangement, which is only to be relieved by further purgation."*

* Practical Observations on the Convulsions of Infants, by JOHN NORTH, Surgeon-Accoucheur. 1826. P. 177.

Dr. WHITLOCK NICHOLL has adverted to this subject. He observes, that he has seen the erethismal state of the brain, which is so frequently the cause of convulsions, kept up, if not induced, by powerful purgatives, which in common practice are repeatedly given unnecessarily.

It is too much the fashion of the day to consider either local or general bleeding necessary in all convulsive affections of infants, although there can be no doubt that convulsions often occur in children of enfeebled constitutions, merely from want of sufficient nourishment, and that in such cases a light, yet generous, diet will be the most efficacious remedy. It was said, indeed, by HALLER, and the doctrine has been adopted and repeated by BICHAT, "that the vital force manifests itself in two opposite states, in paralysis and convulsions. The first is the sign of *diminished energy*, and the second of *augmented energy*." This assumption will assuredly not admit of general application, and, if indiscriminately acted upon, must be followed by injudicious practice. It is worthy of remark, that every animal which dies from *loss of blood* is attacked with violent convulsions during the last moments of its existence. How frequently also are puerperal women convulsed who have had considerable uterine hemorrhage. In such cases there can surely be no "augmented energy of the vital force;" for convulsions occur in these instances before any reaction takes place in the system which has been weakened by excessive bleeding.

The morbid affection which it is the object of the present essay to describe, may be divided into four stages:

"The first that of irritability, the second that of torpor: in the former there appears to be a feeble attempt at reaction, in the latter the nervous powers appear to be more prostrate. These two stages resemble, in many of their symptoms, the first and second stages of hydrocephalus respectively.

"This morbid affection has, as I have stated, usually been first induced by some change in the diet, by which the stomach has been loaded or disordered, and the bowels perhaps affected with diarrhoea; and this latter state has frequently been exasperated by the untimely administration of an aperient medicine. The infant becomes irritable, restless, and feverish; the face flushed, the surface hot, and the pulse frequent; there is an undue sensitiveness of the nerves of feeling, and the little patient starts on being touched, or from any sudden noise; there are sighing, moaning during the sleep, and screaming; the bowels are flatulent and loose, and the evacuations are mucous and disordered.

"If, through an erroneous notion as to the nature of this affection, nourishment and cordials be not given; or if the diarrhoea

continue, either spontaneously or from the administration of medicine, the exhaustion which ensues is apt to lead to a very different train of symptoms. The countenance becomes pale, and the cheeks cool or cold; the eyelids are half closed, the eyes are unfixed, and unattracted by any object placed before them, the pupils unmoved on the approach of light; the breathing, from being quick, becomes irregular and affected by sighs; the voice becomes husky, and there is sometimes a husky teasing cough; and eventually, if the strength of the little patient continue to decline, there is crepitus or rattling in the breathing; the evacuations are usually green; the feet are apt to be cold.

"A similar train of symptoms occurs in other cases, in which the strength of the little patient has been subdued, and the vascular system exhausted, by the abstraction of blood. In both cases leeches are sometimes again applied to subdue this new form of disease, under the erroneous notion of a primary cerebral affection. This measure infallibly plunges the little patient into imminent, if not irretrievable, danger.

"Sometimes the sinking state goes on in spite of every appropriate remedy.

"Stimuli, if efficacious, reduce the frequency of the pulse, and restore the wonted warmth, colour, expression, and smiles to the countenance.

"The condition of the cheeks, in regard to colour and warmth, may be considered as the pulse of very young infants, indicating the degree of remaining power, or of exhaustion. In the present case especially, there is no symptom so important, so distinctive. It is from the condition of the cheeks, in conjunction with a due consideration of the history, that the diagnosis of this morbid state, and the indication of the appropriate remedies, are chiefly to be deduced. The general surface, and especially the hands and feet, also afford important sources of information as to the condition of the nervous or vital powers. Next to these, the degree of frequency of the pulse and the character of the breathing are points of the greatest importance. During the stage of irritability, the breathing is quick; during that of torpor, it is slower, irregular, suspirious, and finally crepitous; the pulse changes in its beat, from being full becoming smaller, but retaining, perhaps, its former frequency." (P. 8.)

We are to be especially careful not to mistake the stupor or coma into which the state of irritability is apt to subside, for the natural sleep, and for an indication of returning health.

"The pallor and coldness of the cheeks, the half-closed eyelid, and the irregular breathing, will sufficiently distinguish the two cases. It is equally important to distinguish this state from a hydrecephaloid affection arising from derangement of the alimentary canal, and from the coma of hydrecephalus itself. This is

to be done chiefly by observing the condition of the countenance, and by tracing the history and causes of the affection. There is an absence of the heat and occasional restlessness and irritability of the former of these affections, and of the contracted brow, and of the expression of pain on moving the head, observed in the latter." (P. 11.)

Dr. Hall has been frequently consulted when the original disease has been subdued, perhaps, and when the chief complaint of the little sufferer was a state of exhaustion; which a truce from remedies and medicines, and a proper supply of nourishment, and perhaps stimulus, have removed.

"This state of things is often mistaken for inflammation of the brain, or hydropcephalus; and it may be difficult to state the grounds for a just diagnosis between the two affections. It will, however, be of great assistance to be fully aware of the nature and character of exhaustion, and to conjoin with this knowledge a due retrospect of the history of the case, and a due consideration of the effects of the various remedies which may have been employed." (P. 12.)

Dr. ABERCROMBIE also observes,* that, in the last stage of diseases of exhaustion, patients frequently fall into a state resembling coma a considerable time before death, and while the pulse can still be felt distinctly. He has many times seen children lie for a day or two in this kind of stupor, and recover under the use of wine and nourishment. "It is often," he says, "scarcely to be distinguished from the coma which accompanies diseases of the brain." It attacks them after some continuance of exhausting diseases, such as tedious and neglected diarrhœa.

Dr. GOOCH observes,

"I am anxious to call the attention of medical men to a disorder of children which I find invariably attributed to, and treated as, congestion or inflammation of the brain, but which I am convinced often depends on, or is connected with, the opposite state of circulation. It is chiefly indicated by heaviness of head and drowsiness. The age of the little patients whom I have seen in this state has been from a few months to two or three years; they have been rather small of their age, and of delicate health, or they have been exposed to debilitating causes. The physician finds the child lying on its nurse's lap, unable or unwilling to raise its head, half asleep, one moment opening its eyes, and the next closing them again with a remarkable expression of languor. The tongue is slightly white; the skin is not hot, at times the nurse remarks that it is colder than natural; in some cases there is at times a slight and transient flush. The bowels I have always seen already disturbed by purgatives, so that I can scarcely say what

* On Diseases of the Brain, p. 310.

they are when left to themselves. Thus the state which I am describing is marked by heaviness of the head and drowsiness, without any signs of pain, great languor, and a total absence of all active febrile symptoms. The cases which I have seen have been invariably attributed to congestion of the brain, and the remedies employed have been leeches and cold lotions to the head, and purgatives, especially calomel. Under this treatment they have gradually become worse, the languor has increased, the deficiency of heat has become greater and more permanent, the pulse quicker and weaker, and at the end of a few days, or a week, or sometimes longer, the little patients have died with symptoms apparently of exhaustion. In two cases, however, I have seen, during the last few hours, symptoms of oppressed brain, as coma, stertorous breathing, and dilated and motionless pupil."* (P. 16.)

Dr. Hall now proceeds to state the remedies for this morbid affection. Diarrhœa is to be checked, the bowels afterwards regulated, and the strength of the child to be sustained and restored.

"With the first objects it may be necessary to give the tinctura opii and chalk, and afterwards the pilula hydrargyri, rhubarb, and magnesia; with the second, sal volatile, but especially brandy, and proper nourishment are to be given according to circumstances. But in this, as in so many cases of infantile disorders, the young milk of a young and healthy nurse, is the remedy of most importance; in the absence of which, ass's milk may be tried, but certainly not with the same confident hope of benefit.

"Five or ten drops of the sal volatile may be given every three or four hours; and, twice or thrice in the interval, five or ten drops of brandy may be given in arrowroot done in water. As the diarrhœa and the appearances of exhaustion subside, these remedies are to be subtracted; the bowels are to be watched and regulated, and the strength is to be continually sustained by the nurse's or ass's milk. The brandy has sometimes appeared to induce pain: sal volatile is then to be substituted for it; a dose of magnesia has also appeared to do good." (P. 18.)

For the state of irritability the warm bath will be proper. In every case the extremities are to be kept warm by flannel, and the circulation is then promoted by friction.

To exemplify the description of this "morbid affection," and its appropriate treatment, several cases are adduced. We give the following as an example:

"On Saturday, the 21st of March, I was called to an infant three months old, under the following circumstances: It had been weaned a fortnight; during this period it had been fed with milk and barley-water, and once a day with the addition of bread. It

* Account of some of the most important Diseases peculiar to Women. Pp. 357-358.

remained well until the Thursday before my visit, when it became affected with fever, restlessness, crying, and moaning in its sleep, and with diarrhœa, passing several undigested and mucous stools. A dose of calomel was given, which induced sickness. A second dose was then administered, which, in the course of that and the succeeding day (Friday), was followed by sixteen evacuations.

"During Friday night there were much heat, interrupted sleep, and griping pains, followed by offensive evacuations. On the following morning there was some degree of dozing or coma; the eyes were imperfectly closed, the tunica albuginea alone being visible; and the mouth was open. This inanimate state, attended by coldness of the cheeks, hands, and feet, would continue for ten minutes, and then there would be some degree of reaction.

"This state of things continued during the whole of Saturday, the dozing assuming the character of more settled coma. I saw the little patient late in the evening: the cheeks were then pale and cold; the eyes were half open and unfixed, and unexcited by any external object, however brilliant, and the pupils were moderately dilated, and unmoved on the approach of light; the pulse was 132; the breathing irregular and sighing; the general surface pale, and the hands and feet cold.

"There were thus the usual state of the comatose stage of hy-drencephalus. The condition of the countenance, general surface, and extremities, and the history of the case, however, led me to view it as one of exhaustion, and not of inflammation and effusion within the head. I therefore prescribed five drops of brandy, and three of sal volatile, to be given alternately every hour; and I directed the little patient to be put, once in the interval of the two hours, to the breast of a young and healthy nurse.

"Under this discipline there was a gradual, but not unchequered amendment. The stupor began to alternate with restlessness, and there were frequent startings: more than once the restlessness was so great as to require the use of a warm bath, by which it was greatly relieved, and quiet and sleep induced. The countenance gradually assumed a more natural and animated appearance and expression, with an occasional smile. The bowels were moved four times on the succeeding day, the evacuations being green.

"On Monday morning a little magnesia and rhubarb were given, the other remedies having been, and being still, continued. The little patient started much less on this day, and slept quietly, and there was no return of restlessness to require the warm bath.

"On the succeeding days there was an obvious and progressive amendment. The brandy and sal volatile were gradually abstracted, the breast being continued." (P. 21.)

In another case Dr. Hall was requested to see a little girl, aged two years and three quarters, who had laboured under an attack of influenza. The affection of the chest had been severe and protracted, and sixteen leeches had

been applied, besides the administration of other depletory measures, before it had subsided.

"The symptoms of affection of the chest were, however, subdued at last; but the little patient was left extremely exhausted, and in this state a new train of symptoms supervened, not less alarming, and more puzzling, than the first. The child fell into a dozing state, and lay with its eyelids but half closed; it moaned when any attempt was made to rouse it; the eyes were unfixed on any external object, the pupils were dilated, yet partially contractile on the influx of light; the pulse was 140.

"On withdrawing into an adjoining room, the medical gentleman whom I had the pleasure of meeting observed, "Hydrencephelas has now supervened, and we must administer calomel." I replied that I took a different view of the case; that it resembled hydrencephalus indeed, but arose from exhaustion; and that brandy, not calomel, could alone save the little patient's life. I referred to the history of the case for sufficient sources of exhaustion; and to the facts detailed in the preceding part of this paper for the actual occurrence of such cases in practice.

"We administered brandy, directing thirty drops to be given every two hours, with barley-water in the intervals, and a quarter of a pint of ass's milk twice in the twenty-four hours. The bowels were relieved by magnesia and the warm-water injection.

"This plan of treatment lowered the number of the pulse, and gradually diminished the severity of the other symptoms. Still the eyes were not to be fixed by presenting any bright object before them; the pupils remained dilated; the tunica conjunctivæ became inflamed from exposure, between the partially closed eyelids; and once or twice the *fæces* were passed involuntarily in bed.

"The brandy having occasioned pain in the bowels, (an effect which I have several times observed,) it was given alternately with the *spiritus ammoniæ aromaticus*. The rest of the plan was pursued with unexampled assiduity by a most tender mother, who did not once undress or leave her little patient until she saw it out of all danger. This task was the severer because, although the symptoms which have been detailed subsided gradually and favorably, they were succeeded by an equally severe and sadly protracted aphthous affection.

"The first symptom of amendment was a diminished frequency of the pulse; the next a restored susceptibility of the pupils to light; then the eyes became attracted and fixed by external objects, and a smile began to play upon the little patient's countenance; the eyelids closed more and more perfectly during sleep, and the conjunctivæ lost their inflamed injected appearance; the knees were drawn up, and the posture on the side began to be assumed spontaneously." (P. 24.)

Cases of a similar nature have also been related to the author by Dr. TWEEDIE, Mr. HEMING, and other practitioners.

Since Dr. Hall's paper was read at the Medico-Chirurgical Society, Dr. Gooch has given us additional proofs of the frequency of such cases, in his recently published work.

This little essay is especially worthy the attention of junior practitioners, who are certainly too much in the habit of referring, without discrimination, all diseases of infants to inflammatory action, and of presuming that, whenever there are any symptoms of heaviness or drowsiness in a child, free bleeding and "heroic" doses of calomel are instantly demanded, to prevent effusion of water within the brain, or to remedy cerebral congestion. That cases of this sort do occur, and frequently too, there can be no doubt; but it is of the utmost importance that the practitioner should be aware of the occasional existence of a train of symptoms arising from *exhaustion*, which, without due attention, may be easily mistaken from hydrocephalus, when in fact there is no cerebral affection, and the infant consequently be bled or purged to death at the very moment when its safety depends upon a directly opposite mode of treatment. The diagnosis between these cases may, it is true, be somewhat difficult. It cannot be established by the presence or absence of any particular symptom; but it may from a careful consideration of the commencement, progress, and duration of each individual case. The *effect* of the treatment that is adopted will, of course, guide our opinion of the nature of the case. If symptoms be relieved by nourishment and moderate stimuli, it cannot be necessary to bleed or "push the calomel."

Dr. Marshall Hall deserves the best thanks of the profession for having first directed their attention to a subject which has very generally been overlooked by practitioners, notwithstanding its great practical importance.

Elements of Practical Midwifery; or, a Companion to the Lying-in Room. By CHARLES WALLER, Consulting Accoucheur to the London and Southwark Midwifery Institution; and Lecturer on Midwifery and the Diseases of Women and Children, at the Medical School, Aldersgate street.—18mo. pp. 135. Highley, London. 1829.

THE intention of this little volume is to present to the student of midwifery, in a condensed form, those rules which are particularly applicable to the practical department of the science.

The author trusts that the frequent inquiries amongst his own pupils for a concise book of reference, will

sufficiently apologize for the present undertaking, which is intended as a remembrancer in the lying-in room, and consequently will by no means supersede the necessity of consulting the more voluminous treatises on obstetric science. To the gentlemen attending Mr. Waller's lectures it will certainly be useful, as it forms a syllabus of that part of the course in which the varieties of parturition are described.

The anatomical description of the pelvis is very briefly given, as it is presumed that those who are about to enter upon the practical part of midwifery, have previously made themselves acquainted with the structure of the parts concerned in parturition. Under the head of "Duties of the Accoucheur," much concise, yet very judicious advice, is given, which should be thoroughly impressed upon the mind of every student and young practitioner, who ought never to forget that his professional success will depend, in a great measure, upon his address and general conduct in the lying-in room. It could not be the intention of the author, in a work like the present, to enter upon the description of cases of very rare occurrence. In addition to the very proper remarks he has offered upon the management of the placenta, we may refer to a circumstance which would certainly perplex the novice in midwifery, and perhaps embarrass the senior practitioner.

It has occasionally happened, that, although the placenta *can* be felt at the upper part of the vagina, it is *not* perfectly detached from the uterus. Two instances of this kind have happened within our own knowledge, and the following case, which we extract from a very useful work,* conveys a good lesson upon the subject. A woman had been delivered without difficulty about three hours before the attendance of Dr. Ramsbotham, but the placenta remained behind, with flooding and fainting. She was much depressed, with a small weak pulse. The *greater part* of the placenta was down *in the vagina*, at which the midwife had been lugging, till she had nearly separated the funis; the *remainder* was in the uterus. On passing his hand, Dr. R. found that nearly one third of the mass was morbidly adherent to the fundus uteri; and, during its separation, the woman suffered an additional loss, so that, on withdrawing his hand, she fainted. The uterus contracted well, and there was no more hemorrhage. After being in a state of much depression and uncertainty for a few days,

* Practical Observations in Midwifery, by J. RAMSBOTHAM, M.D., 1821, p. 105.

the patient recovered. That such cases are very rare, we admit, but they are much too important to be forgotten by the practical accoucheur.

As Mr. Waller has successfully practised the operation of transfusion, in cases of sinking and approaching death, after severe uterine hemorrhage, and also been very conspicuous for the zeal with which he has recommended this, we fear, still too much neglected practice, we shall extract his observation upon this highly important subject.

"So simple is the principle, so easy the performance, and so splendid have been the results of this operation, that it has borne down the clamour of its opponents, and may now fairly be said to be fixed upon as firm a basis as most other operations in surgery. The design of this work being to convey practical information, it is not intended to enter into any lengthened historical detail. As, however, the trials which were formerly made have been brought forward in evidence against transfusion, it will be but right to state that, as at present practised, it differs very materially both in principle and mode of performance.

"It was formerly recommended in certain diseased states of the constitution, and the blood was taken from the inferior animals, (the calf, sheep, &c.) It is now used as a remedy in desperate cases of hemorrhage; human, and not brute, blood being employed. This difference, though a very important one, was entirely overlooked by the objectors to the operation. Again, it has been asserted by some that transfusion is wholly unnecessary, because, if the blood were arrested, the patient would invariably recover without it; and, if the hemorrhage continued, that it would be useless, as the blood injected into the arm would immediately pass out again at the uterine artery. Many well-authenticated cases, however, have shown that the first assertion is incorrect;* and, with regard to the second, it remains to be proved whether, under the circumstances of the case, the introduction of fresh, pure, and living blood, would not, by acting as a stimulus to the system, induce such a state of contraction in the muscular structure of the womb as would prevent any further effusion. This is thrown out as a mere conjecture, as it has not yet been employed with this intent, and consequently is unsupported by facts; but, upon reflection, it seems probable that such would be the effect: at any rate, the attempt would be perfectly justifiable in a case otherwise hopeless; and it should be particularly borne in mind that under no other circumstance has this operation been hitherto performed.

"For the suggestion of transfusion of blood as a remedy in these desperate cases of hemorrhage, the profession and the public at large are under deep and lasting obligations to Dr. James Blundell;

* One melancholy example of this kind came under the author's own observation; the poor woman living three hours after the hemorrhage ceased. This case led him to think seriously of transfusion.

and, although the proposal was treated with 'neglect, opposition, and ridicule,' still he was not to be deterred from his purpose till the remedy had experienced a fair trial; being convinced, from his numerous and well-conducted experiments upon the dog, that in this animal, at any rate, the injection of canine blood into the veins was not only practicable and safe, so far as the operation was concerned, but that it really was applied to the nourishment of the system, and consequently was something more than a mere stimulus to the heart's action. This fact being established with regard to the dog, it required no great stretch of the imagination to suppose that human blood, injected into human veins, might also be made subservient to the purposes of human circulation; and upon this principle, and grounded upon these facts, a trial of it was recommended.

"From its novelty, however, some time elapsed before it was put into practice; and it is productive of great satisfaction to the author when he reflects that the first successful operation of transfusion was performed on one of his patients by Dr. Blundell and himself. The female was an exceedingly delicate, weakly creature, who had lost a large quantity of blood very suddenly after parturition, and in whom the most powerful stimulants failed to procure more than temporary benefit.*

"Dr. Blundell, Mr. Doubleday, and others, have in several instances successfully employed transfusion, and, with the exception of one case out of about fourteen,† (where the operation has been properly and carefully performed,) there has been no recorded instance of failure. When it is considered that the cases were otherwise desperate, and that perhaps the mechanical means (from its being a new remedy) were defective, its value must be highly esteemed; and it may, perhaps, be reckoned among the greatest improvements, or at any rate the most valuable addition, which has of late years been made to the means of the accoucheur, and one which is in itself sufficient to hand down the name of its projector to posterity, as one of the greatest benefactors to *womankind*. Nor is it likely (the safety and utility of the operation being fully established,) that its beneficial effects will be confined to the female sex, as it is equally applicable to the male when sinking from large losses of blood, whether from accident or any other cause.

"*Method of performing the operation.* The transfusion of blood from one person into the veins of another may be effected in various ways. The syringe has hitherto been employed, and as it is very conveniently and safely performed by means of this instrument, the reader's attention will not be distracted by the relation of any other method. An improvement to the common syringe has been

* This took place in August 1825. For a detailed account of the case, see the medical journals of that period. The author has twice performed the operation since that time, and with the most perfect success.

† The precise number has escaped the author's memory.

made by Mr. Lloyd, an ingenious instrument-maker, residing in King street, Borough : to the barrel of this is appended a small funnel, by means of which contrivance the blood passes directly from the arm of the person supplying it into the syringe, without being obliged to be first received into another vessel : some little time is thus gained, which is an object of importance. A stopcock is also attached to it, by turning which the communication may be opened either with the funnel or with the extremity of the instrument, according as the blood is either being received into the syringe from the funnel above, or is being passed into the vein of the patient. The instrument is made of brass, and well lined with tin ; and it is scarcely necessary to add, should be perfectly cleaned before it is used, and slightly warmed by passing tepid water several times through it, taking care not to use it too hot, as it would have a tendency to coagulate the serum of the blood.

“The basilic or the cephalic vein of the patient is to be laid bare to the extent of an inch or an inch and a half, taking care to divest it of its surrounding cellular membrane. A blunt-pointed bent probe, or a curved and blunt needle, is then to be passed under its lower extremity, in order that pressure may, if necessary, be made upon it with the finger, and the blood be prevented from oozing out ; which, by obscuring the orifice, would be productive of difficulty and delay. An opening should be made into the vein large enough easily to admit the point of the tubule which is attached to the extremity of the syringe. This instrument is made to contain two ounces only, it appearing from previous experiments to be safer to inject a small quantity at a time.

“These preparatory steps having been taken, a very free incision is to be made into the arm of the person about to furnish the blood, so that it may pass in a full stream into the funnel, and be from thence absorbed into the syringe ; the stopcock must then be turned, and the funnel removed. The next part of the operation consists in expelling any quantity of air that may be contained within the instrument : for this purpose it is to be placed vertically, the handle below, the point upwards ; the piston being gradually pressed upwards, till about a teaspoonful of blood is expelled. The point of the finger being then placed over the nozzle, the horizontal direction is to be given to the instrument, which should be insinuated about half an inch within the vein, in the direction, of course, towards the heart, and the blood *very slowly* and cautiously injected. This is a point of great importance to be observed ; for the heart's action is in these instances so weak, that a sudden influx of blood would, in all probability, at once overwhelm it, a fact witnessed by the author in the experiments upon the horse before alluded to. On removing the syringe from the vein, it should be instantly well washed out with cold water. Before repeating the injection it is better to wait for the space of four or five minutes to allow the blood time to circulate over the

body; it may then be repeated in the same manner, the patient being narrowly watched with regard to the effect it has produced upon her.

"Eight, ten, or twelve ounces of blood may be thus injected; and it will seldom, if ever, be found necessary to exceed this latter quantity, even where the hemorrhage has been very profuse. The intention of the operation is not to restore the blood-vessels to the same degree of fulness as previously existed, but so far to add to the power of the system that the heart may be enabled to continue its contractions. It should be remembered that this organ (the heart) having been for some time acting on a greatly diminished supply of blood, is well prepared to receive the stimulus which an additional quantity would afford it, although small in comparison to that which has been lost. This circumstance is proved by the fact that the pulse evidently improves, sometimes after the first, but always after the second injection; and the effect is in general permanent, there being no recurrence of the syncope afterwards, which affords pretty satisfactory evidence that the injected blood does not act as a mere stimulus, but that it gives *power* to the system.

"When a sufficient quantity of blood has been introduced, the probe or needle is to be removed from the arm, the edges of the wound brought together by means of adhesive plaster, and over this a bandage loosely applied: in fact, it should be treated as a common incised wound."

We confess that in general we regard very short roads to professional instruction with more doubts of their safety and advantages. This little volume may however be fairly recommended to the attention of the obstetrical student. It contains, in a very small compass, a great deal of very useful elementary information.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Muscularity of the Uterus. (Extract from the *Mémoires de l'Académie Royale de Médecine.*)

For a long time the muscularity of the uterus was contested, both because it had not been demonstrated by the knife, and because the direction of the supposed or demonstrated fibres could not be determined. RUYSCN first pointed out, at the fundus of the organ, a layer of muscular fibres, which he described as a new muscle, intended to facilitate the separation of the placenta. Later anatomists bestowed upon this the name of the *muscle of Ruysch*.

WEITBRECHT discovered two layers of muscular fibres, surrounding the uterine orifice of each of the fallopian tubes. He described these as two *orbicular muscles*. JEAN SUE had distinguished, on four sides of the womb, many points where the fibres were interlaced in such a manner as closely to resemble the nodosities of wood. These he considered as four distinct muscles, which he called *quadrigemini*.

MADAME BOIVIN pushed the discovery much further. She has remarked, with exactitude, in the texture of the organ, four superposed layers of muscular fibres, distinct and easily separable from each other. She successively determined and described the extent, force, and particular direction of these fibrous bundles upon the external surface of the uterus: she found upon the border and each side of the median line a transverse order of fibres, in three distinct bundles, one directed forward, the other two backward. These three bundles, placed upon each other, after having transversely traversed the rounded angles of the organ, and furnished fibres to its anterior and lateral walls, continued, in becoming insulated, to form the round ligaments of the tubes, &c. On the internal surface, upon the median line, before and behind, are found other layers of entirely vertical fibres, which also extend from the internal orifice of the uterus up to the fundus. Arrived at this point, these fibres are recurved, and, diverging, direct themselves from the centre to the circumference, crossing and interlacing with each other, to form around the fallopian angles the double layer of concentric fibres which have been made known by some anatomists, under the denomination of *orbicular muscle of the tubes*. Finally, at the internal part of the cervix uteri, Madame Boivin particularly remarks a sort of raphe, equally marked upon both surfaces of the cervix, and upon the median line. From each side of the raphe arise numerous folds, regularly disposed: upon the anterior surface, these folds, throughout remarkable for their regularity, are formed like a palm-leaf. On the posterior surface, the fibres also exhibit a ramified arrangement, though they are here more irregular.

CHARLES BELL has made similar researches; but, less favored by circumstances, he did not push his researches as far as Madame Boivin, so that part of our distinguished midwife's researches are confirmed by those of Bell, without losing any of their originality or merit.

On the Effects of the Gastric Juice on the Stomach after Death, and on Abstinence.—Dr. POMMER has instituted a number of experiments on dogs, cats, and rabbits, to ascertain the correctness of the opinion of JOHN HUNTER relative to the dissolving action of the gastric juice upon the stomach after death; and he has arrived at the following conclusions:

In animals, the gastric and intestinal secretions neither soften nor dissolve the membranes of the stomach or intestines. The secretion of these fluids is rather diminished than augmented during hunger; neither does the latter produce inflammation of the stomach; and death from inanition is the result of the general prostration of the vital forces, and not of inflammation of the stomach. Carnivorous animals support hunger better than herbivorous, and cats better than dogs; carnivorous animals who during abstinence drink water, live longer than those deprived of drink. Rabbits die often of inanition, although they have still some aliment remaining in their stomach: these animals never drink. When, driven by hunger, they take meat, they die in a

short time afterwards, although they can digest this substance, as is easily shown. In animals destroyed by inanition, the veins of the lower stomach are ordinarily gorged with blood.—*Med. Chirurg. Zeitung.*

Menstruation at the age of nineteen Months.—A case of this kind is related in the third Number of *Meckel's Archiv. für Anat. und Physiologie* for 1827. At birth this child was of an ordinary size; but after the first month she commenced to grow rapidly, and at nine months it was of the usual size of a child of a year and a half old. About this time she passed from the vagina some drops of blood; at eleven months of age, she had another and more abundant sanguineous discharge; and at the same time the mammary gland began to be developed, and hairs appeared on the mons veneris. At fourteen months she had a third, and at eighteen months a fourth, sanguineous evacuation from the vagina. The whole physical development of the child is precocious, but her mental faculties are not greater than those of other children of her age. She appears to have no desire for sexual intercourse.

Case of Recovery after prolonged Submersion. By M. RÉNÉ BOURGEOIS, D.M. &c. (*La Clinique.*)

A young man, eighteen or twenty years of age, was taken out of a river after a submersion of at least twenty minutes, and was immediately seen by M. B. in the following state: He was cold and discoloured, the face paticularly; the lips were swollen and bluish; a yellow, viscid saliva oozed from the mouth; the eyes were opened and fixed, pupils dilated; the limbs flabby. There was neither pulsation of the heart or arteries, nor the least appearance of respiration. The whole aspect of the body was cadaverous.

The patient was undressed, and wrapt in a woollen covering, which had been warmed in the sun. He was then placed on the right side; and M. B. endeavoured, by dry and forcible frictions over the whole surface of the body, to reanimate the central organs, and at short intervals he gently breathed into the lungs. The soles of the feet, and the hypochondria, were tickled; and a feather was introduced into the nostrils, under which was held at intervals, and with precaution, a bottle of liquid ammonia. Successive clysters of hot salt-water were given; and, after a time, a vein was opened in the arm, but without any result.

More than an hour elapsed without alteration, when it was observed that blood had flowed from the opening in the vein. A ligature was applied, and a superficial swelling of the vessels was quickly perceived. A trickling of blood followed, which, though slow and by drops at first, soon amounted to ten ounces. By degrees the progressive penetration of air into the lungs was visible, and in three quarters of an hour respiration was almost completely restored: it was short, frequent, and loud. The pulsations of the heart were felt through the whole system; the pulse was strong, tumultuous, quick, and irregular. Heat began to manifest itself on the surface of the body, and some colour occasionally appeared in the face. Suddenly, violent and alternate contractions of the muscles betrayed strong convulsions, and blood, notwithstanding all endeavours to stop it, flowed, to the amount of sixteen ounces, from the arm. This emptying of the vessels was followed by general debility and a heavy sleep.

Mustard poultices were then applied to the lower extremities, and epi-

them to the forehead; and afterwards stimulating enemata were given. None of these remedies produced better effects than the preceding ones, and the next day the patient remained in the same condition. After having been again bled in the arm, he began to open his eyes, and to recover the use of his senses. On the following day his situation was very satisfactory.

The various circumstances of this case offer an additional example of the efficacy which sometimes attends the perseverance in the employment of proper remedies, and should act as a caution against the abandonment of drowned persons, until decomposition, or other unequivocal signs of death, have taken place.

PATHOLOGY.

General Induration of the Arterial System.—A man, aged fifty-six years, entered the Hospital of Toulon for the treatment of an old ulcer of the left leg, which leg was covered with varicose veins. The foot had been amputated at Smyrna, in consequence of a viper bite some time previously. He also complained of pain in the left foot, the little toe of which was observed to be swelled, cold, and of a bluish colour. This man, who was naturally robust and vigorous, had been worn down by long privations and profound chagrin. His answers and his countenance indicated a deep melancholy; he had little appetite; sleep short and interrupted; pulse large, slow, and regular; the heart beat over a very large surface. The gangrene extended rapidly, and was considered as the consequence of the disease of the heart, which was quite unequivocal. As mortification destroyed the different parts, they were removed. The pain was insupportable; the pulse became slower and slower; and the arteries offered such a degree of resistance to pressure as led to the conviction that they were ossified.

On dissection, the heart attracted great attention. It was extremely enlarged; and there were several white patches on its surface. The left ventricle offered as much resistance to the scalpel as thick and dried parchment. The origin of the aorta, as well as the aortic valves, were completely cartilaginous; and this was the case with the whole of the aorta, the iliac and crural arteries, and their branches. There were several portions of these various arteries ossified, besides the whole being cartilaginous. The arteries of the upper extremities were in a similarly indurated condition.—*Ephemerides de Montpellier.*

Bone found in the Heart.—Dr. BARRIER, of Amiens, presented to the Royal Academy of Medicine a very slender osseous body, an inch and a half long, and pointed at its two extremities, which he had extracted, after death, from the right ventricle of the heart of a man, sixty-two years of age. This bone had pierced the ventricle in three places, and had commenced to pierce it in three others. The heart had probably pierced itself in its contractions, as the bone was situated transversely in the ventricle.—*Archives Gén.*

Cartilaginous Degeneration of the Stomach.—Dr. DIEFFENBACH relates, in *Rust's Magazine*, tome xxvi., the case of a woman who had for twelve years a movable round tumor in the abdomen, which many physicians had pronounced to be a scirrhus ovary. This woman was never affected with nausea, vomiting, or any of the signs usually attendant on scirrhus of the stomach. On

examination after death, it was found that the tumor was formed by the stomach itself, which had become cartilaginous, and at its anterior part an inch thick: at the posterior part of this viscus only there was a small membranous portion of less thickness. The cartilaginous parietes of the stomach could not exercise any movement or trituration whatever, whence it would result that the movement of this organ is not necessary for the comminution of the food. This specimen of pathological anatomy, so interesting for the physiology of digestion, is preserved in the Royal Museum at Berlin.

Softening of the Spinal Marrow.—M. BARTHÉLEMY has furnished an instance of softening of the spinal marrow under remarkable circumstances. A horse was inoculated with the saliva of a rabid dog, became hydrophobic, and died on the third day afterwards. The body was examined, and the cineritious substance of the whole extent of the spinal marrow was very much softened, and of the colour of wine lees. The membranes enveloping the spinal marrow were also much injected. M. DUPUY has observed the same sort of softening in hydrophobic cows, but never in mad dogs.—*Memoires de l'Acad. Roy. de Med.*

PRACTICAL MEDICINE.

Extract from a Paper by Dr. HAYWARD on the Use of Prussic Acid. (American Journal of Med. Sciences.)

There is another form of disease in which I have employed prussic acid, and in which I think it promises to be of great advantage, and that is painful menstruation.* Within a few weeks a lady, who for two or three years past has been in the habit of taking from six to twelve grains of opium in a day during the period of her menstruation, without obtaining great relief, omitted, by my advice, in the three last returns of the catamenia, the opium, and took the prussic acid; and she has since informed me that she has not for years had so little pain at that period as under the use of this medicine. My experience with it, however, in this affection, has not been very extensive; but, having seen decided benefit from its use in the few cases that have fallen under my notice, I shall not fail to employ it whenever a proper case of the kind offers.

In the various forms of hysteria, this medicine may be advantageously employed, and I have been much pleased with its effects in lessening the violence of the paroxysms of this disease in some cases in which I have administered it. From the great power which it exerts over the nervous system, acting apparently as a more perfect sedative than any thing else with which we are acquainted, it would seem to be particularly adapted to allay the violence of hysterical affections.

It having been spoken of by Dr. GRANVILLE as an useful remedy for asthma, I gave it a trial in several cases, and regret to say that I have never, in a single instance, derived the slightest benefit from it in this disease. We certainly should not conclude, reasoning *a priori*, that it would be advantageous, if we admit the pathological views which have been taken of asthma by Dr. WILSON PHILIP. He considers this disease, I believe, to be owing to a diminished energy of the respiratory nerves; and hence galvanism, by increasing this energy, affords relief.

* We are informed by a physician of much talent and experience, that the extract of stramonium may be relied upon with much certainty in cases of dysmenorrhœa, in doses of half a grain twice a day.—EDITORS.

Be the theory what it may, I should certainly not again administer prussic acid to an asthmatic patient: not that I ever saw it produce any permanent injury, but I certainly never discovered any benefit, and have thought that it has sometimes prolonged the paroxysm of the disease.

The dose which I have been in the habit of exhibiting is much less than what is frequently recommended; nor do I ever continue it more than three or four days, if a decided good effect is not produced in that time. Both these precautions appear to be necessary when the terrible power of the article is considered, and the sudden manner in which it sometimes manifests its deleterious influence on the system.

On the Hydrocyanate of Iron as a Substitute for the Quinine.—Dr. HASSE has employed with success the prussiate of iron in an intermittent fever which prevailed at Güstrow, in the spring of 1827. The sulphate of quinine was successful in almost every case; but, as its expensiveness prevented Dr. H.'s prescribing it in all cases, he determined to try the efficacy of the Prussian blue. When the patient presented gastric symptoms, which was frequently the case, Dr. H., on the first appearance of the precursory signs of the paroxysm, administered five grains of ipecacuanha every ten minutes until vomiting was produced; or, according to circumstances, a laxative during the apyrexia. The hydrocyanate of iron was then administered in the following form:

R. Hydrocyanate of Iron, gr. xij.; Aromatic Powder, or white Pepper or Mustard in powder, half an ounce. Mix, and divide into twelve powders. One powder to be taken every four hours during the apyrexia.

Of course, from four to six powders were usually taken. Commonly the paroxysm which followed the administration of the febrifuge was so mild, that three powders were sufficient, in the second and third apyrexia, to keep off entirely the third paroxysm. To prevent its return, Dr. H. gave two powders on the seventh, fourteenth, and twenty-first days, and the fever did not return.

The prussiate of iron, administered in the above manner, never produced ill effects either upon the digestive canal or upon the brain. It was, however, injurious in one case of fever, accompanied with great pain in the spleen, increased at each access of pyrexia, and with a painful swelling of the left foot. These disorders being removed by appropriate remedies, the prussiate of iron showed its accustomed efficacy. Many of those who were cured by the prussiate of iron had previously tried the pepper without benefit; so that the cure cannot be ascribed to the pepper which was contained in the above formula.—*Hufeland's Journal.*

On Transfusion.—Dr. DIEFFENBACH, of Berlin, has made many experiments relative to transfusion; and he has found that if an animal be brought into a state of asphyxia by copious bleeding, it is not unfrequently restored to life by transfusion of blood from an animal of the same species: in most instances, however, it dies instantly, or very soon after the operation. Death always ensued when, during the asphyxia, a considerable quantity of blood from an animal of another species was injected, even though the quantity of blood injected was very small, as was generally the case in these experiments. Some animals appeared to be more easily affected by different blood than others: cats and dogs, for instance, more than sheep. Cold-blooded animals almost always died after the injection of the serum of blood from warm-blooded animals. Birds seemed to be unable to bear even the smallest quantity of

blood from a quadruped: they died instantaneously, and in the most violent convulsions.—*Rust's Repertorium*.

Treatment of Hydrophobia with Chlorine.—MM. SEMMOLA and SCHOENBERG are said to have employed chlorine in the treatment of hydrophobia, with success. It is used in the following manner: The wound is to be washed as soon as possible with the chlorine in water, and afterwards covered with lint impregnated with the solution; and this treatment is to be repeated twice a day till the wound cicatrises; but, if the wound does not heal by the end of five days, it is then to be treated in the ordinary manner. If the wound has healed before employing the chlorine, it is to be cauterized with the butter of antimony, and when the eschar separates, the lotion is to be used. During the first five days, the chlorine is to be given also internally, in doses of two drachms in an ounce of sweetened water, three times a day. Care should be taken in its administration; for, if given in too large doses, or not diffused in a sufficient quantity of water, it will be injurious.—*Bulletin des Sc. Med.*

Neuralgia Facialis.—The *Osservatore Medico di Napoli* contains an account, by Dr. CAMPAGNO, of a case of neuralgia facialis, which was cured by the vinous tincture of colchicum. A multitude of remedies had been previously tried without effect.

SURGERY.

Excision of the Uterus. By M. RECAMIER. (*From a Correspondent in Paris*.)

I must now relate to you an operation that has made great noise, and at which I fortunately happened to be present. It is the newest thing going. Recamier encroaches on surgery now and then, but in this case he denies having done so, as no surgeon has ever excised the uterus in France. I send you the account, because it was erroneously reported in two Journals here, and it may have been copied from them into the English. M. R. performed the same operation eighteen months ago, and the woman died three months after, of inflammation of the intestines.

The age of the patient whose case I am about to relate, is forty-five. It was ascertained that the os tincæ was entirely destroyed by ulceration, and the cancer had extended up the neck and into the body of the uterus. The uterus was found to be unnaturally connected with the rectum, by introducing the finger into the latter, and finding that the uterus did not slide over it, as it does in the natural state. The patient was placed in the position for lithotomy. No speculum was used. Two double-hooked forceps were fixed on the neck of the uterus, and, being crossed, the uterus was dragged down towards the vulva. With a sharp-pointed bistoury, the attachment of the vagina with the upper part of the neck was divided. With his fingers, M. Recamier broke down the cellular membrane attaching the neck to the bladder: this was two inches long, proving that the neck was preternaturally elongated. Then, with a sharp-pointed bistoury, he cut into the peritoneal cavity. Having enlarged this opening sufficiently, he seized the uterus by its fundus with two fingers, and, with a probe-pointed bistoury, having rather a rough edge, he cut, or rather sawed, through about the upper third of the broad ligament on one side; including, of course, the fallopian tube. A strong needle, armed with a ligature, was passed through the side of the vagina, and

brought out behind the broad ligament at its lower part; the ligature seized, and carried round the upper divided edge of the ligament, and the needle withdrawn. A *serre-nœud* was placed upon the thread. The same thing was done on the other side. Thus having the principal vessels under his control, he finished his section of the broad ligament on either side by means of the probe-pointed bistoury. He then divided the connexions with the rectum, *from behind*, and the remaining attachment with the vagina. The section of the ligaments was made as close to the uterus as possible.

The patient lost a considerable quantity of blood during the operation, but the hemorrhage ceased on tightening the *serre-nœuds*. A portion of omentum, or appendix epiploica, presented, and was returned. The patient was put to bed without being dressed, and in a quarter of an hour after there was not the slightest hemorrhagy. Up to this day (August 12th,) she has been going on favorably. The operation was performed July 26th.

The principal error in the relation of this case in the French Journals was that the ligatures were said to have been applied before any part of the ligaments was cut; but, as the principal vessels lie at their lower part, by dividing the upper part there was so much less to be included within the ligatures, besides facilitating their application. The pain was most severe at the pulling forwards of the fundus uteri. The operation lasted twenty minutes.*

August 12th, 1829.

Aneurism of the Subclavian Artery. Ligature of the Vessel on the distal side of the Tumor. By M. DUPUYTREN, (*Hôtel Dieu*.)

A daylabourer, five months before his admission on the 28th May, when in good health, suddenly felt pain at the bottom of the neck on the right side. In two days after, he perceived a small swelling, the size of a nut, in this situation; and this increased in size; his arm at the same time becoming weak, and feeling numb. The case was ascertained to be aneurism. Absolute rest, and the constant application of ice, failed to arrest the progress of the symptoms. The tumor slowly increased in size, and the patient, being unable to use his arm, was taken to the *Hôtel Dieu*. After his entrance he was bled seven times from the arm, and the tumor was kept constantly covered with evaporating lotions and pounded ice.

June 12th.—Tumor has continued to increase: is now the size of a hen's egg, and occupies the situation of the right subclavian artery, from its exit between the *scaleni* to the clavicle; upwards and outwards towards the *trapezius*, it projects considerably. Below the clavicle, the axillary artery seems sound. The trunk of the common carotid is healthy. The pulsations of the commencement of the subclavian and of the *arteria innominata* are strong, large, and seem to indicate a dilated state of these vessels. General health good. Action of the heart attended with no unnatural sound, but the pulsations of the ventricles are strong and sonorous, and heard over an extensive surface. Respiration easy; but little cough. Right arm and hand œdematous. The fingers are half closed, and the patient can neither open nor shut them more. Numbness of the whole limb. Mind tranquil. The repeated bleedings from the arm have somewhat weakened the patient, but he feels no pain. Bowels regular. Tongue clean, and sleep tranquil. He can only rest on his back. The colour of the surface of the affected limb, and its temperature, are natural.

* The French Journals report this patient to be entirely recovered.—Sept. 28th.—EDITORS.

M. Dupuytren, in commenting upon this case, observed that its nature, and more especially the situation of the disease, left but few, and those even very precarious, resources to the surgeon. A ligature could not be placed on any point of the subclavian artery, even by exposing the vessel on the cardiac side of the scalenus anticus muscle; for the volume of pulsation felt in this situation led to the belief that the artery was not healthy here. M. Dupuytren determined to apply a ligature on the commencement of the axillary artery, as the only treatment which offered any probability of success.

The operation was accordingly performed. The patient was placed on a table on his back; an incision was made below the clavicle, beginning close to the edge of the deltoid, and extending about two inches and a half towards the sternum, in a direction nearly parallel to the clavicle. The skin and fat being divided, the incision was carried through the pectoralis major. About two thirds of the pectoralis minor and the fascia were then divided, when the axillary vein presented itself, greatly distended and enlarged to several times its natural size. Being pulled aside, the artery was exposed, and a ligature was easily carried round it. It was now ascertained, by raising the vessel by means of the ligature against the point of the finger, that the pulse at the wrist was stopped, and the ligature was tied. The wound was then simply dressed. During the operation several arterial branches were divided and secured. After the first incision through the skin and fat, the other parts were divided upon a director. Throughout the operation, the utmost coolness, precision, and judgment were displayed.

15th, (third day from the operation.)—Aneurismal tumor diminished in size. Its pulsations are as strong and superficial as before. Patient appears in a favorable state; no fever.—Compresses, dipped in a weak solution of sugar of lead, applied to the swelling; and over this was placed a bladder filled with pounded ice. A rigorous diet adopted, and antispasmodic draughts exhibited, with acetate of lead.

17th.—No accident had occurred. The limb retains its natural heat and colour. The patient appears agitated. Tumor had been much disturbed by some violent fits of coughing. Pulse quick and frequent. M. Dupuytren directed blood to be taken from the arm. It was observed in the middle of this day, that the compresses covering the wound were tinged with florid blood. The dressings were removed, but the source of the hemorrhage was not discovered. The wound was then washed with cold water, and the bleeding ceased. Bled again in the arm. He had afterwards a tolerable night. The quantity of blood lost from the wound was not more than five or six ounces, but the patient was much weakened.

18th.—Wound looked well; no hemorrhage.—V.S.

19th.—Bottom of the wound appeared swollen, as if the aneurismal tumor had made progress in that direction. V.S. The pulsations in the tumor above the clavicle continue the same: the operation has not, therefore, produced any other good effect than that of lessening the size of the tumor.

20th.—During the morning he continued in the same state. The arm retains its temperature, the numbness remains as before. In the course of this day the patient complained of great weakness. Towards evening repeated fits of syncope came on, and he expired at four o'clock on the morning of the 21st.

During the progress of the disease, it appears that, before and after the operation, thirteen or fourteen venesections were employed; six of these were during the last eight days.

Dissection.—The right arm, being that of the side operated upon, presented a livid and gorged appearance; numerous livid veins were perceptible, and the cuticle was raised at various points. A pupil, who had been almost constantly with him, stated that the arm underwent no particular change, and that the colour and temperature remained the same to the last. Neither in the head or abdomen were there any appearances at all remarkable.

Thorax: The first and second ribs, on which the tumor rested, were absorbed, and at one point entirely destroyed. The right and left cavities contained about eight ounces of sero-sanguineous effusion, of deep colour. The heart was flaccid and empty: it was very large, the parietes being attenuated rather than hypertrophied. The pleura investing the back part of the right lung was inflamed; false membranes, of inconsiderable thickness, appeared on its surface. The lung of that side presented numerous points of hepatization; the aorta, from its origin to within three fingers' breadths from its passage through the diaphragm, was enormously dilated. The walls were very thick, and the internal surface of a livid red, having at numerous spots fungous growths, erosions, and asperities, proceeding from very hard ossifications. This great change in the structure of the aorta ended suddenly at the ventricle. The subclavian was diseased throughout its course. The tumor formed by it extended beneath the clavicle, passing behind the axillary artery, which at this point was flattened; backwards, it reached as far as the superior spinous fossa. Although it had undergone a perceptible diminution since the application of the ligature, both in this and in the other directions in which it had extended during life, no perforation was discovered in it. In the aneurismal tumor there were but few clots, except in front, where the greatest dilatation existed: here there were numerous depositions, in thin layers; there were also some at the bottom, but not so many. No trace of the arterial parietes could be discovered beyond the interval of the scaleni muscles; beneath the clavicle, the three tunics of the vessel could be traced, and presented the alteration above described as existing in the aorta, viz. an appearance of fungous irregularities. The constriction exercised by the ligature, which was of silk, did not appear to be very great. In one point of the circumference of the artery, a small opening was found, which was attributed to the pulling of the ligature during the dissection of the tumor. The inner membrane was cut in some places, but not in others. *There was no trace of coagulum*, and the whiteness of the membrane showed that no inflammatory action had taken place in it. The vessel was sound throughout the rest of the limb. The axillary vein, at the situation of the ligature, was black, fungous, and softened, and torn with the greatest ease.

From the remarks made by M. Dupuytren, previous to the performance of the operation in this very important case, it is clear that he has formed a very erroneous estimate of the success which has been obtained in this country from the experiments of tying the artery on the *distal* side of the aneurismal tumor. The experience and success of Mr. WARDROP were chiefly referred to. "In one case," said M. Dupuytren, "where the arteria innominata was probably the seat of disease, Wardrop, in 1827, tied the subclavian only, and the patient was *quickly cured*." We regret that this was not the case. Mrs. Denmark, the patient referred to by M. Dupuytren, died, from the gradual enlargement of the aneurism, on the 13th September, 1829. The details of her case subsequent to the operation, which was performed by Mr. Wardrop with much temporary advantage, we shall give in our next Number.

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There are several reasons why the results of this study may differ from those of other studies. First, the sample size was relatively small, which may have limited the statistical power to detect differences between groups. Second, the study was conducted in a single center, which may limit the generalizability of the findings. Third, the study did not include a control group, which may have influenced the results. Finally, the study did not include a long-term follow-up, which may have provided more information about the durability of the treatment effects.

I took my post in the coffee-shop, had my pipe and coffee, while my drogue-man entered into conversation with the Turks about us. I soon heard him narrating a history of a miraculous cure, which he had seen me perform some days before, on the body of a dying Effendi; how I had taken out his liver, and put it in again, after scraping off the disease; and how the patient got well the next day, and gave me five purses. I was exceedingly annoyed; but the fellow seemed to mind my anger little, and even reproved "my want of prudence" with a frown.

Now, the only thing that could have given origin to "the scraping of the man's liver," &c. was my having opened a boil on his own back the day before. The Turks swallowed this story: had it been more marvellous, it would have been still easier digested. One turned up his eyes, and said, "There was but one God;" another praised my skill, and cried, "Mahomet is the friend of God!" The latter gentleman held out his wrist to have his pulse felt, and said, in a very civil tone of voice, *Guehl, gıuour*, "Come, you dog." This endearing epithet Turks consider ought not to give an infidel offence, because it is more a man's misfortune than his fault to be born "a Christian," and consequently "a dog."

My Greek, whose familiarity was very offensive, (and it is a national fault,) now whispered in my ear, "No bite, that fellow never pays." I gave the man, however, my advice, and got a cup of coffee in return.

A well dressed man, who had been sitting by my side in silence for half an hour, at last recollected he had a wife or two unwell, and very gravely asked me "What I would cure a sick woman for?" It was a question to delight the soul of Abernethy. I inquired her malady, "She was sick." In what manner she was affected? "Why, she could not eat." On these premises I was to undertake to cure a patient, who, for aught I knew, might be at that moment *in articulo mortis*. I could not bring myself to drive the bargain; so I left my enraged drogue-man to go through that pleasing process. I heard him ask a hundred piastres, and heard him swear by his father's head and his mother's soul that I never took less: however, after nearly an hour's haggling, I saw fifty put into his hand; and the promise of a hundred more, when the patient got well, I saw treated with the contempt which, in point of fact, it deserved. No man makes larger promises than a Turk in sickness, and no man is so regardless of them in convalescence. I visited my patient, whom I afterwards found both old and ugly; but I was doomed on the first occasion to see no part of her form: she insisted on my ascertaining her disease with a door between us, she being in one room and I in another; the door was ajar, and her head enveloped in a sheet, as it was occasionally projected to answer me, was the only part of her I had a glimpse of. This was the only woman I ever attended here, or in the islands, who would not suffer the profanation of my fingers on her wrist. I, however, could just collect enough from the attendants as to cause me to suspect she had a cancer; and I did all, under such circumstances, that I could well do, I gave her an opiate. This lady was no sooner prescribed for than my attention was directed to the youngest wife, who was pleased to need advice, though her sparkling eyes and smiling lips denoted little of disease. She was extremely pretty, and removed her veil with little difficulty; but she would have her pulse felt through a piece of gauze, which was sufficiently thin to transmit, not only the pulsations of the artery, but also the pressure of the fingers, which mode of communicating symptoms I found a very common one in practice. I ordered her some me-

dicine, which I am quite sure she did not take, and which, in all probability, she did not require. After smoking a pipe and drinking sherbet, I took my leave.

In a few days after this my first visit in Constantinople, I was sent for to the house of a grandee, where a consultation was to be held on a pacha's case, and one of great importance. I found the patient lying in the middle of a large room, on a mattress spread on the carpet; for "the four-posted beds" of Don Juan and Dudu have no existence in Turkey, and both gentlemen and ladies repose on their mattresses thrown on the carpet of the divan, in their daily habiliments, none of which they doff at night.

A host of doctors; Jews, Greeks, Italians, and even Moslems, thronged round the sick man; and amongst them were jumbled the friends, slaves, and followers of the patient: the latter gave their opinion as well as the doctors, and, in short, took an active share in the consultation. But he who took upon himself to broach the case to the faculty was a Turkish priest, who administered to the diseases both of soul and body. He prefaced his discourse with the usual origin of all things; he said, "In the beginning God made the world, and gave the light of Islam to all the nations of the earth. Mahomet (to whose name be eternal honour,) was ordained to receive the perspicuous volume of the Koran from the hands of the angel Gabriel; which book was written, by the finger of God, before the foundation of the world; and in its glorious page was to be found all the wisdom of every science, whether of theology or physic; *therefore*, all learning, except that of the Koran, was vain and impious; *therefore* he had consulted It in the present case, and the repetition of the word honey, he discovered tallied with the number of days his highness suffered, (to whom God give health;) *therefore* honey was a sovereign remedy, and one of its component parts was wax, a true specific for the disease before them. Did not the bee suck the juice of every herb? was there not wax in honey? did not wax contain oil? *therefore*, why not try the oil of wax? Oh! illustrious doctors!" he continued, "let us put our trust in God, and administer the dose. Our patient has been thirty-six days sick, *therefore* let him have six-and-thirty drops every six-and-thirty hours. And, as there is but one God, and Mahomet is *therefore* his prophet, let the oil of wax be given!"

The moment this rigmarole ended, all the servants, and even many of the doctors, applauded the discourse.

There was no time allowed for discussion; the same archpriest took care to see the doctors feed forthwith; each of us got four Spanish dollars, and left the unfortunate sick man to his fate. But, going out, when I expressed my astonishment to one of the faculty (an old Armenian,) about the exhibition of this new remedy, he looked around him cautiously, and whispered in my ear the word "poison!" On further inquiry, I found the bulk of the patient's property was invested in a mosque. In spite of the remonstrance of my drogman, I returned to the door I had just quitted, and gave an attendant to understand his master would die if he took the medicine. The poor man died, however: I heard of the event about a month afterwards.

I was shortly after called to a man who was said to have a fever. When I visited him, I asked what was the matter with him, and where he felt pain? but his friend made the customary reply, "That is what we want to know from you: feel his pulse, and tell us!" I accordingly did so, found it rapid, his breathing laborious, and his skin hot; but not one of the symptoms could

I get from the patient or attendants. The Turks have the ridiculous idea, that a doctor ought to know every disease by applying the fingers to the wrist. I thought from what I observed I was warranted in taking blood in this case. I did so; but, no sooner had I bound up the arm, than I was requested, for the first time, to examine the other hand, which I did, and, to my utter astonishment, found two of the fingers carried away, the bones protruding; and then only was I informed that the patient was in the artillery, and had lost his fingers a week before by the explosion of a gun.

I suspected at once the occurrence of locked jaw; I felt his neck; it was like a bar of iron; the man had been labouring under tetanus for three days, and died the following morning. You may well conceive my indignation at such incredible stupidity as the attendants exhibited here, and my choler at being told that the result "had been written in the great book of life," and could not be avoided or deferred. Be that as it may, I certainly would not have bled him, had I any reason to suspect the affection of which he died. You may imagine how difficult it is for a medical man to treat such people; and, consequently, how rarely they are benefited by him.

There are few Mahometans who do not put faith in amulets: I have found them on broken bones, on aching heads, and sometimes over lovesick hearts. The latter are worn by young ladies, and consist of a leaf or two of the hyacinthus, which the Turks call *mus-charumi*: this is sent by the lover, and is intended to suggest the most obvious rhyme, which is *ydskeerumi*, and implies the attainment of their soft desires.

Sometimes these amulets are composed of unmeaning words, like the *abracadabra* of the ancient Greeks for curing fevers, and the *abracalans* of the Jews for other disorders. At other times they consist simply of a scroll with the words *Bismillah*, "In the name of the most merciful God," with some cabalistical signs of the Turkish astrologer Geffer; but most commonly they contain a verse of the Koran.

I think the most esteemed in dangerous diseases are shreds of the clothing of the pilgrim camel which conveys the sultan's annual present to the sacred city. These are often more sought after than the physician, and frequently do more good, because greater faith is put in them.

The most common of all these charms is the amber bead, with a triangular scroll, worn over the forehead, which the Marabouts and the Arab sheiks manufacture, and is probably an imitation of the phylacteries which the Jews were commanded "to bind them, for a sign, upon their hands, and to be as frontlets between their eyes." It would be well if no more preposterous and disgusting remedies were employed; but I have taken off from a gunshot wound a roasted mouse, which, I was gravely informed, was intended to extract the ball.

A less offensive and a more common application to wounds, is a roasted fig. I believe old women prescribe it for gunboils in England; and the practice is as old as Isaiah, who ordered "a mass of figs" to Hezekiah's boil.

Of all Turkish remedies, the vapour bath is the first and most efficacious in rheumatic and cuticular diseases. I have seen them removed in one-fourth part of the time in which they are commonly cured with us. In such cases I cannot sufficiently extol the advantages of the Turkish bath. The friction employed is half the cure, and the articulations of every bone in the body are so twisted and kneaded that the most rigid joints are rendered pliant.

I have trembled to see them dislocate the wrist and shoulder joints, and

reduce them in a moment: their dexterity is astonishing, and Mohammed's shampooing, at Brighton, is mere child's play in comparison. Query: would not gout be benefited by this remedy, provided it could be really introduced into England as it is used in Turkey?

As a luxury, I cannot better describe it than in the words of Sir JOHN SINCLAIR: "If life be nothing but a brief succession of our ideas, the rapidity with which they now pass over the mind would induce one to believe that, in the few short minutes he has spent in the bath, he has lived a number of years."

I cannot conclude without telling you how all Frank medical men are teased by the Turks for aphrodisiacs, which they denominate *madjoun*: I am solicited for it at every corner; and it is lamentable to observe that hardly a man arrives at the age of five-and-thirty, whom debauchery has not rendered debilitated, and dependent on adventitious excitement for his pleasures. The ladies, on the other hand, are desirous of gaining honour by a progeny like Priam's; but they have few children in general, for polygamy is probably injurious to population. They cease not, however, to annoy me for medicines to make them fruitful; and are as solicitous for specifics as Rachel was to obtain from her sister some of the prolific mandrakes.

I had always occasion to observe that the sick man was all civility and courtesy when his life was in jeopardy, but the moment he became convalescent he treated me with arrogance, as if he had been ashamed of letting an infidel see that a Moslem was subject to the infirmities of humanity. My services were forgotten whenever they ceased to be required. All the other medical men complained of the same ingratitude: indeed, no physician opened his mouth till the patient opened his purse. The Greeks certainly behave better in this respect; but yet there is that strange obliquity of principle in them, that I never doubted, while a Greek fed me generously with one hand, that he would not have picked my pocket with the other at the same moment.

Such is the low state of medical science in this country; and such probably it was in Europe so late as the tenth century. It has been well remarked, that the state of medicine may be considered as the criterion or barometer of the state of science in a nation. Wherever science and refinement have extended their influence, there medicine will be most cherished, as conducive to the interests and happiness of mankind.

INTELLIGENCE.

MONTHLY REPORT OF DISEASES.

WE stated in our last report that the cases of Cholera which had fallen under our own observation had been mild, and easily controlled by medicine. In the course of the last fortnight, we have seen three cases of this disease of unusual severity, although the patients ultimately recovered. In each the attack was very sudden; the vomiting and purging violent and incessant. A state of extreme and alarming exhaustion very rapidly supervened. The surface of the body became cold; the pulse was remarkably slow, in two of the cases under fifty, and there were severe cramps in the legs. Almost immediate relief was obtained in each of these cases from hot brandy and water, after which opium was administered, and mild diluents freely given. The

patients quickly recovered. If, in compliance with the Broussaian doctrines, stimuli had been withheld in these cases because there were great irritability of the stomach,* there can, we think, be no doubt that they would have terminated fatally.

* Propositions de Médecine, par F. J. V. BROUSSAIS, ccxi.

Surgical Lectures. Mr. HOWSHIP, surgeon to the St. George's Infirmary, &c. will commence, on the 5th instant, a course of surgical lectures. These lectures, throughout each course, will be copiously illustrated by the notes of cases or dissections that have fallen under Mr. H.'s personal observation. The appearances before and after death will be exhibited in an extensive series of drawings, and also by a numerous and choice collection of morbid anatomical preparations, many of them finely injected. Thus will be especially demonstrated all the peculiarities in the morbid anatomy of hernia, aneurism, injuries of the head and spine, urinary calculi, diseases of the kidneys, bladder, prostate gland and urethra; stricture; abscess or disease, common and specific, in every part of the alimentary canal. Numerous specimens of various diseases in the bones, with drawings illustrative of the minute appearances and actual condition of each morbid structure, as ascertained and demonstrated by the solar microscope, are also prepared, to facilitate the progress of the student.

Midwifery. Mr. JEWEL, surgeon accoucheur to the Middlesex Infirmary, &c. commences his next course of lectures on Midwifery, and the various diseases connected with that branch of medical science, on Friday, October 2d, at the Theatre of Anatomy, Little Windmill street. To the first case of labour the student is accompanied by Mr. Jewel, or an experienced pupil; and, in all protracted and difficult cases, Mr. J. attends for the purpose of giving clinical instruction.

Medical and General Botany. Mr. GILBERT BURNETT commences his course on Tuesday, 13th October, at seven o'clock in the evening, at the Theatre of Anatomy, Great Windmill street.

MONTHLY LIST OF MEDICAL BOOKS.

[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]

Medical Botany, No. XXXIII. By JOHN STEPHENSON, M.D. F.L.S. &c. and J. M. CHURCHILL, F.L.S. &c.—Tilt, Fleet street.

In this Number there are well-executed engravings of the *Pistacia Lentiscus*, *Origanum Vulgare*, and *Gentiana Lutea*; together with a very complete account of their qualities and chemical properties, their medical properties and uses.

Atlas of Delineations of Cutaneous Eruptions; illustrative of the Descriptions in the Practical Synopsis of Cutaneous Diseases of THOMAS BATEMAN, M.D. F.L.S. By A. T. THOMSON, M.D. F.L.S. Professor of Materia Medica in the University of London, &c.—Longman, 1829.

In our review of Dr. Thomson's much-improved edition of Bateman's "Synopsis," we have expressed our opinion of the elegance, accuracy, and extreme utility of this "Atlas," in which various cutaneous diseases are illustrated for the first time. The plan of marking on each plate the commencement, progress, and termination of each eruption, renders the different delineations particularly useful to the student.

Pathological and Practical Researches on Diseases of the Brain and the Spinal Cord. By JOHN ABERCROMBIE, M.D. &c. Second Edition, enlarged. —8vo. pp. 476. Edinburgh and London, 1829.

The Mother's Monitor; or, Nursery Errors. By JAMES QUILTER RUMBALL, Surgeon, &c.—12mo. pp. 121. Wilson, London, 1829.

If the voice of this "Monitor" had never been heard, mothers would have had no cause for lamentation. Our readers will be satisfied with the following specimen of Mr. Rumball's correction of nursery errors: "*Vomiting the food is a preventative of evil, requiring no remedy, and, as it takes place when the stomach is too full, we need not be fearful of overloading it!*" (Page 30.)

Elements of Practical Midwifery; or, Companion to the Lying-in Room. With Plates. By CHARLES WALLER, Consulting Surgeon to the London and Southwark Midwifery Institution, and Lecturer on Midwifery and the Diseases of Women and Children, at the Medical School, Aldersgate street.—18mo. pp. 135. Highley, London, 1829.

METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

August	Moon	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	2 p.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
20			57	63	60	29.12	29.51	56	55	WSW	NW	Show'ry	Show'ry	Show'ry
21		.15	60	64	57	.69	.82	58	50	WNW	WNW	Fine	Fine	Fine
22			60	63	54	.79	.68	59	54	SW	SSW	Cloudy	Fine	Rain
23			57	67	67	.42	.29	55	60	W	WNW	Rain	Rain	Cloudy
24			59	62	50	.17	.53	62	53	NWv.	WSW	Cloudy	Show'ry	Cloudy
25		.79	57	64	50	.76	.94	50	50	WNW	Wvar.	Fine	Fine	Fine
26			59	64	58	.94	.60	55	50	SW	S	Cloudy	Cloudy	Cloudy
27			62	65	53	.50	.34	56	55	W	SW	Fine	Show'ry	Rain
28		.106	52	61	54	.40	.60	55	58	NWv.	NWv.	Show'ry	Show'ry	Fine
29		.15	58	64	52	.80	30.00	60	56	NE v.	NNE	Cloudy	Fine	Fine
30			56	62	53	30.03	30.00	56	57	NE	NE	Fine	Fine	Fine
31			58	58	55	29.97	29.93	57	60	NE	NE	Cloudy	Fine	Cloudy
Sept. 1			55	62	51	.86	.83	60	60	NE	N	Cloudy	Cloudy	Cloudy
2		.05	60	66	53	.81	.89	60	54	NNW	NNW	Cloudy	Fine	Fine
3			58	63	54	30.04	.99	54	52	NNE	WSW	Fine	Fine	Fine
4			60	62	53	29.89	.77	52	52	WSW	WNW			
5			60	64	53	.60	.37	52	53	S	S	Cloudy	Fine	Cloudy
6			62	67	52	.41	.48	53	54	SSW	SW	Fine	Fine	Cloudy
7			58	65	50	.53	.45	54	55	WSW	S	Fine	Show'ry	Rain
8			56	64	52	.45	.47	53	58	S var.	SW	Cloudy	Show'ry	Fine
9		.55	60	65	57	.52	.56	56	59	WSW	S	Fine	Fine	Rain
10		.27	62	67	55	.31	.17	61	56	S	WSW	Fine	Fine	Rain
11		.11	60	65	48	.42	.49	52	55	WNW	WSW	Cloudy	Cloudy	Rain
12		.34	59	62	54	.54	.50	57	55	WSW	W	Fine	Fine	Fine
13			58	62	48	.40	.18	55	57	SW	WSW	Fine	Fine	Rain
14		.63	54	60	45	.09	.26	57	55	WNW	WSW	Fine	Fine	Cloudy
15			52	59	50	.52	.72	55	61	WSW	W	Fine	Fine	Fine
16			53	56	46	.45	.60	67	59	ENE	NE	Rain	Rain	Fine
17			52	57	50	.83	.61	67	67	W	SW	Fine	Cloudy	Cloudy
18		.40	55	59	51	.09	.12	67	65	S	W	Cloudy	Cloudy	Cloudy
19			54	55	50	.34	.63	65	62	NWv.	N	Rain	Rain	Fine

The quantity of Rain fallen in the month of August, was 4 inches and 45-100ths.

NOTICES.

Communications have been received from Dr. ARROWSMITH, Mr. JEWEL, Mr. COSTELLO, Dr. BLAKE, Dr. ROBERTS, &c.

The Editors are obliged to Dr. BLAKE for his kind offer: they will at all times be happy to receive communications from him.

The Memorial, of which "the subject ought to rouse every medical man in England," appears to the Editors to be too entirely of a personal nature to produce the general excitement the memorialist expects.

ERRATUM. At page 351, line 15, for "hodrencephalus" read "hydrancephalus."

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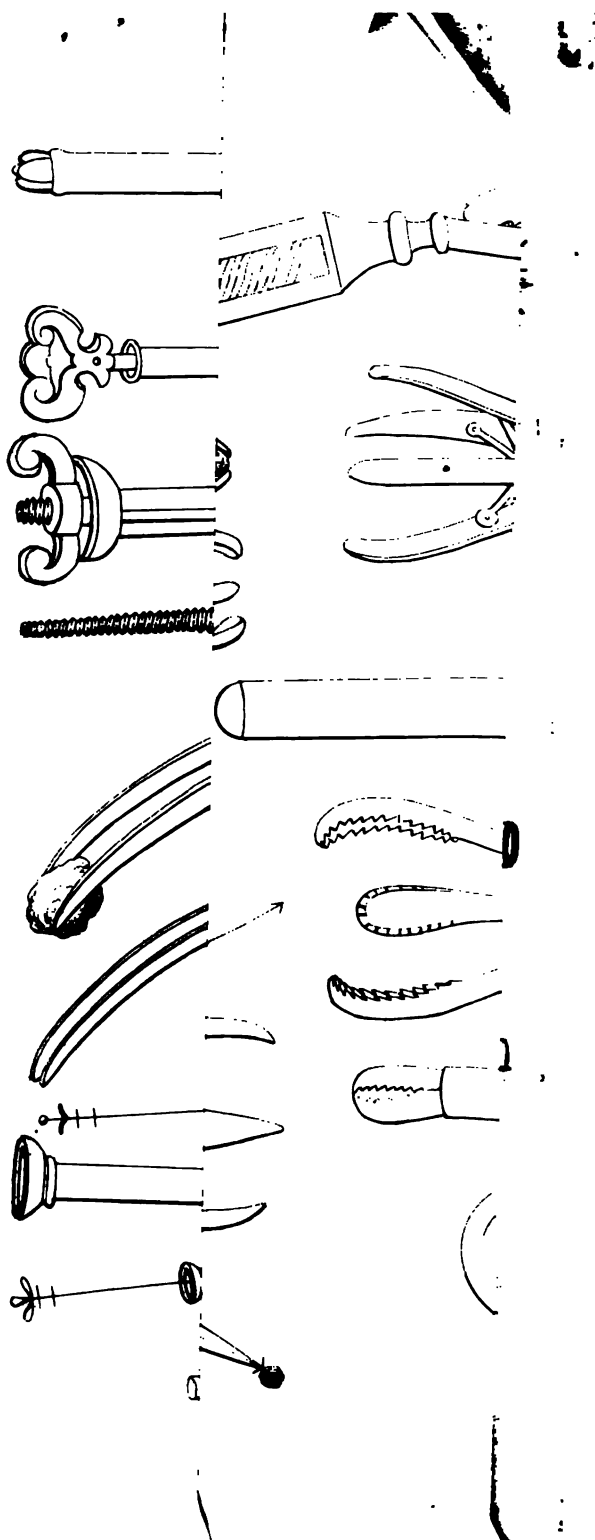
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Boylan Lib

THE LONDON
Medical and Physical Journal.

NO. 369, VOL. LXII.] NOVEMBER, 1829. [NO. 41, *New Series.*

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush.*

ORIGINAL PAPERS, AND CASES,
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER
AUTHENTIC SOURCES.

LITHOTRITY.

Historical Sketch of Lithotrity. By W. B. COSTELLO, Esq. late
Assistant to the Inventor, Dr. CIVIALE.*

(Concluded from p. 303.)

It was in 1817, while Dr. Civiale was engaged in the study of lithotomy, that he first conceived the possibility of curing calculus without the medium of this cruel operation. This notion acquired plausibility from certain facts, which came to his knowledge during the progress of his researches, and his mind was worked into enthusiasm in pursuit of the means of accomplishing so desirable an object, by the horror with which he had been inspired on witnessing a laborious operation of this kind. But it will be seen how far distant he was at that time from the happy end with which his labours were ultimately crowned, when we learn that, influenced as he was by the reigning problem, "the dissolution of the stone," his first inquiries were directed to the power and applicability of chemical reagents. Well knowing the variety of substances that enter into the composition of vesical calculi, and firmly persuaded that the only rational means of destroying those concretions must be reagents, he had naturally two objects in view, or, in medical language, two indications to fulfil. First, to devise means for procuring small portions of the calculus, by which its exact nature would be determined; secondly, to construct a pouch

* We have given in the plate those instruments only to which M. Costello refers in his paper.—ED.

or bag, capable of holding the stone, and of resisting at the same time the action of whatever chemical substance might be employed for the destruction of the calculus. He accordingly projected two instruments for these respective purposes.

These instruments were modelled in wood, and though, of course, totally disproportioned to the object in view, and very complicated, they nevertheless gave an idea of the effect they were likely to produce when reduced to proper dimensions, and executed in a more perfect manner. But the difficulty of finding an artist capable of executing his models, as well as the greatness of expense necessarily attendant on it, obliged him to apply to the minister of the interior for France, for pecuniary aid.

This application to the minister was made in July 1818, and was accompanied by a memoir, entitled "*Details of a Lithontriptic*," and contained also drawings of three instruments, of which the description follows:

The first consisted of a cylindrical metallic tube, of a proper thickness, about three lines and a half in diameter, and eleven inches long. On its external surface were four longitudinal grooves, which became perfect channels, by the tube being received into another metallic tube, somewhat larger, but less thick, than the former.* Four branches were fastened by means of hinges to the vesical extremity of the inner tube; each branch being formed of two pieces, in like manner joined together by means of a hinge. Flexible wires of proper sizes descended through each of the channels already mentioned, and, passing through a groove formed for them in the branches, were attached to the extremity of the second piece. By this mechanism, which offers to a certain extent some analogy with that which regulates the movements of flexion and extension in the fingers, the branches were made to open or close at pleasure. The part of the instrument just described was destined to enter the bladder, and may therefore be called its vesical extremity. At the other extremity was fixed the mechanism which enabled the operator to seize, secure, or let go the stone, by acting on each wire singly, or upon all four at once.

The hollow or cavity of the inner or branch tube was destined to receive a perforator, or steel rod, twelve or thirteen lines long, bearing a saw or trepan head. This head

* A modification of Civiale's present instruments was presented to the Royal Academy of Sciences, in the month of February, 1826, by M. Heurteloup. It is established on this principle, and has not produced the effects its author expected from it.

was concealed by the branches when they closed. A handle attached to the other extremity of the perforator facilitated its movement on the stone, while, at the same time, it prevented its head from passing beyond the branches, so that it could not wound the bladder.

This instrument, the mechanism of which is very complicated, was intended for seizing and fixing large stones only. It bears some resemblance to Franco's quadruple. In the preceding part of this article, we viewed the subject as if Civiale had been acquainted with the labours of his predecessors. This view we thought it right to take; for, whether he was aware of them or not, they were facts which enriched science long before him. We can however affirm, from our near connexion with the inventor, that he was totally unacquainted with Franco's quadruple, as well indeed as with every thing else of this nature that had appeared either in distant or more modern times, when he projected this instrument. It cannot, therefore, be regarded in any other light than that of a coincidence.

The principle of the second, or pouch instrument, was the same as that of the first; it was, however, much more simple. In lieu of four, it consisted of two branches only, which being joined at the extremity, resembled a purse clasp. The branches, like those of the instrument already described, were articulated and grooved, so as to lodge the upper edges of the purse. Instead of one central conduit, there were two, the one communicating with the pouch, and destined to convey into it the solvent fluid; the other directly with the bladder. During the operation the urine might escape through this canal; or if, by accident, any portion of the reagent escaped from the pouch, a liquor capable of neutralizing its noxious influence on the coats of the bladder, might be quickly injected through it.

Five screws were necessary to regulate the movements of the first instrument, as each of the branches might be moved independently of the other three; a single one sufficed for the second, as the branches acted simultaneously.*

The third instrument sketched and described in the memoir, differed from the two former in the great simplicity of its mechanism. It consisted of two metallic tubes, of the same length as the former ones, and made to glide one on the other. The substance of the inner tube was much thinner, so that the size of the stilette, or perforator, which

* This project has since been revived by M. Thibaut and M. Robinet. Pharmacien in the rue de Beaume; but without any result.

passed through it was much greater. The external tube was open at both extremities; the internal supported six elastic steel branches, slightly curved at the end.

A strong button screw, fastened at the other end, was made to control the movements of the tubes upon each other.

The stilette, or lithotriteur, was a long steel rod, which passed in the hollow of the branch tube. Its vesical extremity resembled a trocar. The other was received into a handle, by which its action on the calculus was facilitated, at the same time that it limited its introduction into the tube to the length of the branches; a precaution indispensable for the protection of the bladder. When the instrument was closed, by drawing back the external tube, the branches of the inner tube, no longer compressed together, expanded by their own elasticity. To close the instrument again, it was only necessary to force forward the external tube upon the branches; their extremities were thus approximated, and a round head was formed by their reunion, which rendered the introduction of the instrument into the bladder easy. The analogy which this instrument bears to Hunter's pincers, and the bullet forceps of Alphonso Ferri, will be quickly recognised. It is this instrument, since modified, which M. Civiale now uses, and with which he has effected upwards of *one hundred and forty cures*.

The memoir, as it has been already stated, contained details, drawings, and instructions relative to the use of the instruments above described. The minister of the interior caused it to be forwarded to a commission of the Faculty of Medicine; who appointed the Barons Chaussier and Percy to examine it. The commissaries, however, made no report, and the funds demanded were not granted.

M. Civiale was, therefore, reduced to the painful necessity of either abandoning the project altogether, or of pursuing it slowly to its accomplishment, by devoting to it a part of his own slender income.

And here we cannot sufficiently admire his fortitude and perseverance in boldly encountering the innumerable difficulties which arise, on the one hand, from the coldness and doubt with which new discoveries are too frequently received; and, on the other, from the nature of the subject of his labours.

In the beginning of 1819, he caused the first, the most complicated of his instruments, to be executed, and which was destined for seizing large calculi. M. Faizan was the artist employed on this occasion. The instrument, though

very imperfect, was notwithstanding made use of on the dead body.

Here we may be permitted to observe, cursorily, that M. Civiale, already acquainted with the several conditions of the urethra, calculated to favor the application of his instrument, *vid.* its straightness, (or at least its susceptibility of being rendered straight,) dilatability, &c. not only by the writings of Lieutaud and Montaigu, but by repeated experiments upon himself; a species of exercise which he strongly recommends to all who would excel in the use of the catheter. On this occasion he makes the following remark: "When I see a practitioner precipitately introduce a sound, I conclude he has never practised catheterism on himself."

Without this knowledge, he could not have executed, nor even planned, instruments, which, according to the generally received notions, would have been totally inapplicable. It is, therefore, obvious that M. Amussat's researches had only led him to the knowledge of a fact with which M. Civiale had been already familiar.

The result of his experiments with this instrument, though not completely satisfactory, were so favorable, that M. Civiale no longer entertained any doubt of his ultimate success. These experiments suggested some useful modifications.

We have already said that his second instrument was on the same principle as his first: it was, therefore, an easy matter to form the branches with the double canal, as well as to arrange the mechanism by which the pouch was to open, shut, and fold at pleasure. He now began to be elated with the near prospect of success, and turned his thoughts to the formation of the pouch; when, to his utter disappointment, on consulting his friend, M. Thenaud, one of the most distinguished chemists of the age, he learned that he (M. Thenaud) knew of no substance, whether animal or vegetable, of the thinness and flexibility required, capable of resisting the action of those acids or alkalies which, according to the state of chemical science, it would be necessary to employ for the dissolution of calculus in the bladder. He was consequently obliged to abandon this long-cherished speculation, though not before he had fully confirmed the truth of M. Thenard's assertions by direct and careful experiments, repeated under a great variety of circumstances.

Satisfied, however, that he was developing a novel conception, and that it would ultimately lead to important results, M. Civiale could not consent to abandon it; and

accordingly he set about the execution of his third instrument, which was destined to seize and crush small calculi. This instrument, which had been drawn and described with six branches, was reduced to four even before he had it executed.* This instrument was employed without much difficulty on the dead subject; a small stone having been previously introduced into the bladder, which was filled with water. But, in one of the experiments, one of the branches broke. This accident was of but trivial moment in itself: a more serious difficulty arose, from the smallness of the hole made in the stone, which was not entirely reduced to powder or small fragments until after a conside-

* The late Dr. Meirieu, a skilful mechanic, proposed certain modifications of M. Civiale's instrument in 1826, after having assisted at his operations. He first suppressed the crotchets at the extremities of the branches; he added to the perforator two moveable branches, which are extended or closed at pleasure, so that the calculus might be attacked upon a larger surface. This instrument was tried at the Hôtel Dieu of Paris, for in that establishment every new modification had its chance, with a view to discredit Civiale's instrument. This trial was followed by very serious consequences. The stone could not be fixed in the instrument, and the bladder was pinched. A portion of the mucous membrane was torn out by the instrument. A hemorrhage, which lasted three days, was the consequence; there was very high fever, and swelling of one of the testes. This patient was subsequently cut, and died. Other trials of this instrument, which were made in private practice, proved that this instrument had not the necessary solidity.

The Doctor Baron Heurteloup proposed also, in 1826, new modifications of Civiale's instrument. M. Civiale had shown and explained to him the mechanism of his instrument. M. Heurteloup thought that M. Civiale's four-branched pincers might be applicable to the generality of cases. M. Heurteloup's pincers are so constructed that each of the branches may act separately. He has added a very small three-branch pincers, which he calls the *pince servante*, and which he introduces into the principal pincers. The head of the perforator is suppressed, in lieu of which he has substituted a perforator, the direction of which he changes at pleasure.

The instrument of M. Heurteloup, instead of possessing the advantages which he attributes to it, has the following defects: Its size must frequently render its application difficult; the *pince servante* cannot seize large stones, (as is proved by the case of M. Courtois, on whom he made divers fruitless and painful attempts, for upwards of seven months,) nor small fragments. M. Heurteloup was forced to abandon the use of his *improved instrument* at the Hôtel Dieu, and to have recourse to Civiale's instrument for the extraction of small fragments.

At all events this *pince servante* is of no use when the stone lies close to the neck of the bladder; a circumstance by no means unfrequent. The *maitresse pince*, or mistress pincers, (which has changed its name, since its importation into England, for that of *pince à forceps*,) is then opened behind the stone, and consequently the stone cannot be seized by the *pince servante*.

The mobility of the perforator deprives it, to a certain extent, of its necessary solidity. If the stone attacked be flat, the perforator is liable to strike against one of the branches of the pincers, and may thus be broken or twisted, so as to render its extraction impossible, without lacerating the neck of the bladder and the entire length of the urethra.

Finally, this extremely complicated apparatus is not only useless, but inapplicable for the grinding or crushing of small calculi, or the fragments of large ones.

erable number of trials. A new series of experiments was undertaken; and this defect, which at first view seemed fatal, was, after no inconsiderable pains, effectually remedied, and in January, 1820, this instrument was executed with the following modifications: The diameter of the external tube, hitherto of three lines only, was increased to four. The branches of the inner tube were made longer and more flattened, so that their separation became considerably greater. The thickness of the branch tube, as well as the power of the button screw, were also diminished. The size of the head of the perforator was proportionally augmented, and consequently the destruction which it effected of the stone was much more considerable.

It was during a series of experiments made with this instrument that M. Civiale reduced the number of the branches to three: by this disposition it was permitted to increase their strength, without diminishing their power of seizing and securely fixing the calculus; and the perforator was furnished with three teeth, which, when the instrument was closed, were lodged in the interspaces of the branches.

After this accession to their strength, the branches no longer broke. The head of the perforator, now considerably enlarged, became of threefold utility. The destruction of the stone was greater: from its triangular form, when it was drawn within the branches, it there performed the office of a cone, and extended them to a degree far beyond what had been obtained by their own elasticity alone, and thus stones of the size of a small hen-egg came within the scope of the instrument; while it was no longer necessary to drill small calculi, as they were quickly reduced to small fragments by the united pressure of the branches and the large head of the perforator. The teeth upon the internal surface of the branches were now suppressed, and their extremities were curved at unequal lengths, so as to overlap each other when closed. By this disposition, the bladder was secured against the possibility of being pinched, as the largest of the branches remained alone in contact with its walls when it became necessary to close the instrument.

Hitherto the author's attention had been exclusively bestowed on that part of his enterprise which embraced the principal difficulty, namely, the means of seizing and fixing the stone without injury to the bladder. This object being now fully attained, he naturally turned to the arrangement of other details. Thus, for a simple handle, one with a cog-wheel was substituted, and a support, resembling a

watchmaker's lathe, was adapted to the instrument, by which the entire apparatus was held with sufficient steadiness during the operation of drilling. The action of the perforator in its progress through the calculus was promoted and equalised by means of a spiral wire spring, shut into a tube, three inches in length. The column supporting this tube was moveable at will, and the power of the spring itself was moderated, or entirely checked by a screw which was made to descend on the steel pivot, by which this spring pressed on the end of the perforator. The instrument, together with the accessory parts just described, was completed in 1820.

The degree of comparative perfection which he had succeeded in bestowing upon his apparatus, now emboldened him to make trial of it upon living animals. Having already made himself expert at seizing, grinding, turning, and reseizing the stone, without injury to the bladder, in the dead body, and being anxious to ascertain the degree of pain the operation might occasion, he instituted with this view a new series of experiments. The results, however, were far from being satisfactory. Considerable difficulty was experienced in introducing into the bladder very small calculi; whilst the distress and agitation produced by the foreign body in an organ not accustomed to its presence, constantly prevented the just appreciation of the pain which the effort to seize the stone might have occasioned. These experiments were made in the country, whither M. Civiale was obliged to retire for the recovery of his health.

In the beginning of 1822, M. Civiale devised means for augmenting the destructive power of the perforator, by causing its head to deviate from the axis of the long steel rod on which it is supported; thus giving to it a slight degree of eccentricity. This increase of its power was of great use. A certain number of experiments was now made on the dead body, with a view to determine the duration of the operation. Calculi formed of uric acid, or oxalate of lime, of ovoid form, and measuring from twenty to twenty-five lines in circumference, attacked with a perforator of three lines and a half in diameter, not eccentric, required half an hour for their destruction and entire extraction. Calculi of the same kind, measuring from thirty to thirty-five lines in circumference, attacked with the same perforator, but rendered slightly eccentric, required an hour and a half's labour for the comminution and complete extraction. Calculi of the same nature, equal in size to that of a large hen-egg, subjected to the action of a perforator, of

four lines in diameter, and deviating from the axis of the rod to the utmost degree a straight canula will admit of, required six sittings of half an hour each to produce the same effect.

When stones of inferior compactness were subjected to experiment, the duration varied from a third to a fourth of the time less. The soft calculi were broken by the mere pressure of the branches, and none were found sufficiently hard to resist the power of the instrument. However, when very hard stones were acted on, the progress of the perforator through the stone was slower, the sound produced by its destruction sharper, and the product almost an impalpable powder.

Feeling still how desirable it would be to increase further the destructive power of the drill, another was proposed, the head of which was split, and might be separated, by mechanism, at the other end, acting on a cone which lay concealed between the two blades, to the extent of seven or eight lines. Having thus accomplished this important and arduous undertaking, he caused similar instruments, of lesser diameters, to be executed, decreasing from four lines down to two. This latter instrument is applicable to children of five years of age, and may be used also for the extraction of small stones from the urethra or bladder.

Having enjoyed the advantage of aiding M. Civiale in his long career of brilliant operations, I imagined two modifications of the perforator, suggested by experience, and of which he unhesitatingly approved. The one consists in prolonging its axis, and placing the body of the perforator at a line and a half from its extremity. This is named the shoulder perforator. The prolonged point penetrates the substance of the calculus, and becomes the centre of the excavation; whilst the shoulder, when turned, describes a circle measuring seven or eight lines in diameter. Two perforations effected by means of this drill will excavate a large-sized stone. When a three-branched instrument is armed with a shoulder perforator, on closing upon it, the prolonged point is covered by one of the branches, whilst the body is lodged between the other two; a tooth is sometimes placed on the convexity of the body, opposite to the prolonged point: in this case, the shortest of the branches is grooved or slit longitudinally, to receive it. The advantages of this drill, like that of the *eccentric* drill, (of which it is a modification,) is that it effects twice the destruction of calculus which the simple drill would produce, without augmenting the bulk of the instrument. It is not, however, so

valuable as the simple drill for crushing. The other, which I have not yet employed, is destined to enable the operator to glide over or displace a fungus situated at the neck of the bladder. It consists of the ordinary triangular perforator, having one of the angles rounded and polished. When the branches expand, the smooth or toothless side of the perforator is turned towards the fungus, on which it moves without causing it to bleed; and, if the fungus be pediculated, it displaces it, thus arriving at the calculus, which very often lies behind it.

The results obtained from the use of these different instruments upon calculi of a certain size being now fully satisfactory, other instruments with two branches were imagined for crushing or extracting small calculi. One of these was designated by the name of *brise-pierre*.* It consisted of an external canula and two demi-cylindrical blades. When the blades were conjoined and passed together into the canula, their flat surfaces were applied to each other, thus forming a perfect cylinder. Their vesical extremities were in a slight degree curved, and, being elastic, they separated on being freed from the compression of the open canula, though not to the same extent as the three-branched forceps. When the blades were joined, the vesical extremity had somewhat of the form of a serpent's head. At the other ends, the convex surfaces of the blades were indented deeply, so as to be moved by means of a cog-wheel. When this wheel was made to act on one of the blades only, the lower blade remained fixed, while the upper one glided on it; and by the same wheel both the blades were drawn towards the open end of the canula, by the insertion of a pin into two holes which were pierced through the blades, so as to correspond with each other. In the first instance, the small stone between the branches, or blades, sustained the action of one blade only; in the second, it was crushed by the mutual pressure of both blades. This instrument is but rarely employed, on account of the difficulty experienced in seizing the calculus with it.† The objection to it is, that it affords the bladder no protection against pinching; an accident which is rendered still more probable by any

/* We have already seen that M. Heurteloup reproduced M. Civiale's four-branched instrument. His *brise-pierre* has been also reproduced, under the name of *brise-coque*.

† M. Colombat had a *brise-pierre* very nearly resembling this executed by M. Weber. The movement, however, is different. M. Rigal has invented another, and M. Amussat's differs from all three. The last of these instruments was tried on M. Carpenter and Dr. Petiet, but without any satisfactory result.

irregularity in the form of this viscus. Moreover, in all cases where it might be applicable the three-branched forceps is equally so, while it is exempt from the objections to which this dangerous and inefficient auxiliary is so subject.

Thus we have followed M. Civiale in his labours, from the beginning to their final and happy accomplishment. We have explained the progressive changes which his instruments have undergone, and given the dates at which those changes were made. We have seen that his first instrument, with articulated branches, was executed in 1820; that subsequently this instrument was laid aside for the pincers with elastic branches, of which he had given a drawing in his memoir to the minister of the interior in 1818; that, in 1820 and 1821, he had made divers successful applications of this instrument both on the dead subject and on living animals. In the two following years, this instrument was still further modified by the addition of means to prevent the water escaping from the bladder through the instrument, as well as to abridge the term of the operation.

His chief labours being now terminated, the next care of Dr. Civiale was to find out a person who would consent to a practical application of his method. Towards the end of 1823, three patients with stone offered themselves. He immediately apprised the Royal Academy of Sciences of his intention to operate; and, on the 13th January, 1824, M. Gentil, the first patient who ever underwent the lithotritic operation, submitted to the use of the instrument at M. Civiale's house, in the presence of the Chevalier Chaussier and Baron Percy,* the commissioners appointed to report the result to the Academy, a great number of surgeons and physicians of eminence, amongst whom were MM. Larrey, Giraudy, Nauche, Luc, Sedillot, &c. After having assisted at this operation, the commissioners, in bestowing on it the name of "*Civiale's operation*," or "*discovery of M. Civiale*," speak of it in the following terms: "*This discovery is glorious for French surgery, honourable for its author, and consoling for humanity.*"

Since that time a considerable number of calculous patients have obtained relief by this method from the hands

* It will be remembered that these gentlemen had been appointed also to report on his memoir of 1818. They had this memoir in their hands; they had examined his instruments, witnessed the modifications successively made in them, and were at length witnesses of its application. Their report was read and adopted by this learned body on the 22d of March, 1824.

of Dr. Civiale. When I left him in July, the number of patients cured by him amounted to nearly *one hundred and forty*, and he had then *seventeen* patients under treatment.

In this account we have endeavoured to follow, as closely and concisely as possible, the divers changes and improvements which the lithotritic apparatus underwent, during a period of nearly five years. We have purposely omitted many minute details, which would have perhaps only embarrassed the reader. We have seen that the original theory, "the dissolution of the stone," the most impracticable and useless of all those that had been proposed for the cure of calculus, like alchemy, still a dream, a mere problem, led, nevertheless, to the discovery of a process, the most efficient and brilliant within the domain of surgery, a process which, before the lapse of a few years, is destined to supersede all harsh and dangerous methods hitherto in use for removing stone.

This description terminated, we might deem our task complete, as far as the history of lithotrity or the fame of its admirable author is concerned. But, like all important discoveries, it had no sooner been promulgated than divers persons laid partial or exclusive claim to the priority of the invention. It becomes a duty, therefore, to notice the pretensions of all the parties concerned, and to discuss their validity impartially.

In the preceding part of this article, the claims of Dr. Gruithuisen are discussed, and justice (as far as we could render it) has been done to his ingenious labours.

The next claimant is M. Amussat, who imagined that the entire discovery lay in the use of straight sounds.

We have also shown that Dr. Civiale had been familiar with the use of the straight sound long before 1822, the period at which M. Amussat published his notions on this subject.

M. Leroy is the last and only candidate who contests this point of originality with Dr. Civiale.

However, before we enter on the discussion of this gentlemen's claims, it will be proper to define what is meant by the term "inventor." If we mean by it the man who first conceived the possibility of comminuting calculi in the bladder, the invention belongs to Ammon of Alexandria, to Alsaharavius, Sanctorius, Germanus, the monk of Citeaux, Colonel Martin, Gruithuisen, &c.; and in this case the merit is slender indeed. But if we mean the person who has assembled old and forgotten facts,—him who, in studying those facts, has arrived at new and important

inferences,—him who, for mere doctrines and theories, has substituted a rational and practical method, then Civiale, and Civiale alone, is the inventor.

M. Leroy, however, claims the invention of lithotrity.*

It was not until 1822 that a note inserted in the medical journals† intimated that M. Leroy thought of comminuting calculi in the bladder, by means of an instrument, of which a drawing and description is given in his work published in 1825, entitled “*Exposé des divers Procédés employés jusqu’à ce jour pour guérir de la Pierre, sans avoir recours à l’Operation de la Taille.*” As M. Leroy’s pretensions to the invention of lithotrity are founded on this instrument alone, I shall enter into details on this subject, which I shall extract from M. Leroy’s work. He gives the follow-

* M. Leroy would wish to be considered the inventor, no doubt: the honour is worthy his ambition. In the month of March 1824, he wrote a letter to M. Civiale, in which he proposes community of rights in the invention of lithotrity.

† “M. J. Leroy has presented an instrument, which he calls *lithoprione*, and which he destines (as its name imports) for sawing calculi in the bladder, as well as for extracting them, without having recourse to the cutting operation, which is so cruel and dangerous. This instrument consists in a straight sound, divided within into five compartments: four of them are disposed around, and give passage to an equal number of watchsprings, which meet on the end of a sound, formed like the button of the instrument of Bellocq. These springs expand or close, at will, in the bladder. The central cavity receives a steel rod, armed with a trepan head, which acts as an *emporte-piece* on the calculus, when it has been secured by the watchsprings. After having perforated it, and made it undergo a loss of substance, it is made to turn and present a new surface, on which the trepan head acts in the same manner; and thus it continues to be changed, until all the fragments, which would be too large to pass through the urethra, are extracted through the cavity of the trepan.

“M. Leroy’s instrument might furnish means of utilising the discoveries of modern chemistry. Amongst the reagents capable of dissolving calculi, there are some which may be introduced into the bladder without danger; but, being ignorant of the nature of the calculus, it might be increased, instead of being dissolved.‖ This *lithoprione*, by making known the intimate composition of the stone, will enable us with certainty to select the reagent capable of destroying it; but this advantage, which is certainly great, is however only secondary: there are other results, which it would appear reasonable to expect, and which depend on the action of the instrument itself. These are, the possibility of seizing calculi, were they even the size of a hen egg, of reducing them to powder, and of extracting them from the bladder, without causing to the patient any other pain or fatigue than that occasioned by its introduction, as all the movements of the saw are effected in the interior of the sound.

“M. Leroy would be authorised to expect certain success in the employment of the instrument which he has caused to be executed, if it were possible to make any conclusion from the experiments he has made on dead bodies. Experiments on living bodies will, perhaps, make known to him those defects and difficulties with which he has been hitherto unacquainted.”

‖ On reading this note, it will be asked, was M. Leroy more advanced in 1822 than M. Civiale was in 1818.

ing description of his instrument: A canula, eight inches long, and three lines and a half in diameter, receives into its cavity another canula, much smaller; between both canula an interval exists, of a quarter of a line at most, in which are placed four watchsprings, tolerably strong, and which are attached to a button. A steel ring, furnished with four screws, serves for the fixing of each of the springs separately. Another ring, armed with a comb (*crête*), which is received into a groove of the canula, serves for maintaining all the four springs together, when the stone is seized." (See Pl.)

This instrument was not proposed by M. Leroy until four years had elapsed from the presentation of M. Civiale's memoir. It is almost unnecessary to add, that the author of it himself abandoned it, not only on account of the danger to which its employment would have necessarily exposed him, but also on account of its absolute inutility for any practical purpose. It is true that this instrument might have been introduced into the bladder, and that the calculus might have been secured by the watchsprings; but it was by no means certain that the calculus could be dislodged from their grasp, should it be rendered necessary. M. Leroy was convinced of the imperfection of this instrument, and he accordingly substituted for the watchsprings an elastic branch pincers. This is shown by the following quotation of Baron Percy's letter to M. Leroy: "I have in my possession one of the little watchsprings, for which you have since substituted the forceps of Franco's relation: you let it drop in my room when you came to show me your instruments; with which, most assuredly, you could *not* have performed one of those brilliant operations of which M. Civiale made us witnesses."*

This substitution, however, was not fortunate for M. Leroy. The branches were not sufficiently curved, nor their extremities sufficiently rounded, to give full security to the bladder; and accordingly, in April 1824, M. Leroy, in making his first application of this instrument, on a female, could not seize the stone. He himself informs us that the bladder was pinched, that great difficulty was experienced in withdrawing the instrument, that the patient was subsequently cut, and that she died.

In M. Civiale's first instrument, there was no provision for preventing the water, previously injected into the bladder, from escaping during the operation. His experiments

* P. 149, *op. cit.*

on living animals convinced him of the necessity of remedying this defect; and accordingly the instrument is modified to answer this end. M. Leroy's instrument is in the same respect defective: to correct this defect, he copies M. Civiale's instrument.

Thus we see that it was not until several years after M. Civiale had presented his first work on the pulverization of calculi in the bladder, that M. Leroy first spoke of the possibility of this operation. The instrument he presents for this purpose is quite inapplicable. For this he subsequently substitutes another, analogous to that proposed by M. Civiale in 1818;* and, finally, he follows M. Civiale step by step in the rectifications which the latter found it necessary to make in his first instruments.

We shall remark in this place, that the memoir of M. Civiale was presented in 1818; that MM. Chaussier and Percy were appointed reporters on the same; that M. Civiale's experiments were made publicly in the dissecting rooms of the *Ecole Pratique*;† and that many of his *confrères* were acquainted with his researches: amongst whom we may mention the names of Drs. Alies, Buret, Fenet, Lachaise, Londe, &c., some of whom have since been honourably known in science.‡ It is, therefore, difficult to explain how M. Leroy, who was at that time a student in the School of Medicine of Paris, and who devoted himself especially to the study of this branch of surgery, could have remained ignorant of facts so important, that were taking place, as it were, under his own eyes.

It will appear still more extraordinary that M. Leroy should lay claim to the merit of this invention, when we find him admitting that he had read M. Civiale's manuscript at Baron Percy's house, and "*that he there saw expressed the idea of crushing vesical calculi, by laying hold of them*

* In Fabricius Hildanus we find the drawing of an instrument which resembles the pincers which M. Civiale employed in his first experiments, and which M. Leroy has since adopted. Now it is strange that M. Leroy should quote this author, while he omits reproducing the drawing of this instrument, at the same time that he gives that of several other instruments, which have less analogy with those of which he styles himself the inventor. M. Leroy presents only the *speculum cæcum* of Fabricius Hildanus. It will be asked, was M. Leroy apprehensive, if he reproduced the other instrument, that the resemblance between the pincers he adopted and it would have been too remarkable?

† The school immediately in connexion with the Faculty.

‡ M. Civiale's experiments were made with so little secrecy, that MM. Buret and Lachaise had executed an instrument destined to isolate and attack the calculus in the bladder. In the present year, M. Lachaise made trial of a curved lithotrite of his own invention, in the Hôpital Beaujon, on a patient given to him by M. Blandin, but without success.

with an instrument resembling the bullet forceps of Alphonso Ferri, and by acting on them by means of a stilette or perforator." This avowal ought to set at rest all further controversy on this subject.

M. Leroy has published that he had learned from M. Marjolin, as well as others, that they had seen in M. Civiale's hands the pouch instrument, and none other; and that those gentlemen had never heard of a stilette or perforator; and, notwithstanding, M. Leroy himself informs us that he had read in M. Civiale's memoir of 1818 a proposal of an instrument, *with elastic branches for seizing the stone, and a stilette or perforator for attacking it*. How are these contradictory assertions to be reconciled? Besides, it must be remembered, as I have stated in the London Medical Gazette, that M. Civiale had never executed the pouch instrument, and consequently could not have shown it to any of those gentlemen.

M. Leroy endeavours to take advantage of the fact that the commissioners made no report on M. Civiale's memoir in 1818. Such, however, is the course usually adopted by those learned bodies, not to pronounce on any new method until it has been sanctioned by experience. M. Leroy must be well aware of this. The commission appointed in 1822 to report on his instrument, have not deviated from this course; for, up to 1827, they had not promulgated any report on this subject. The commissioners appointed to examine M. Civiale's memoir in 1818 were the same who were named by the Royal Academy of Sciences to draw up the report in 1824. After alluding, in their report, to this circumstance, and making mention of the drawings and descriptions of instruments contained in this memoir, they express themselves in the following terms: "This lithontriptic apparatus, however, was executed in the following year by a Parisian artist, with the modifications and improvements which it presents at this moment; so that we may trace back, to four or five years since, the method under consideration, although it has not been well known; nor had it acquired complete consistency until somewhat more than three years ago."*

And further on their report, in alluding to the pretensions of M. Leroy, who did not appear until four years later, they say, "It is M. Civiale who arrived the first."

Now, these gentlemen, as we have seen, were in possession of the facts appertaining to this subject for a period of

* Report read before the Academy, 22d March, 1824.

six years. Their judgment was founded on a full knowledge of all the circumstances which bore upon it; and their report is as satisfactory as M. Civiale could have wished it.

At that time M. Leroy raised no murmuring against the report. He confined himself to asserting the merit and independence of his own labours; and this much the commissioners themselves allowed. It was not until the importance of M. Civiale's discovery was confirmed by numerous facts, that M. Leroy put in his demurrer.

M. Leroy felt that he stood in the position of an imitator: to repel the suspicion of having copied from M. Civiale, he published his "*Memoire Justificatif*," in which he boldly insinuates that the commissioners (two most honourable men) had the base complaisance to connive at a substitution of *authentic pièces*. This disgraceful accusation was made against the venerable Chaussier, and the reporter, Baron Percy. The latter disdained to repel the outrage: his only reproof to M. Leroy was the following paternal letter:

"I entertain no feeling of resentment against you, my dear sir. The only injury you have done has been to yourself; and, had you even injured me, I should have already forgotten it. But how is the contestation you have provoked, to terminate; and whither will it lead you? Your adversary, while you spend your time in reclaiming, proceeds prosperously, enjoying his successes, and does not seem to be conscious of the outcry you are endeavouring to raise.

"He has just now forwarded several signed documents, which he affirms to be authentic, and which I believe to be such: you shall be judged on peremptory proofs, and not on words, which are susceptible of interpretation. I regret vividly that you have engaged yourself in such an affair. Read our report, and you will see that the merit of anteriority belongs to Dr. Gruithuisen, and that M. Civiale only made his appearance ten years after him. He may have had the same idea as Dr. Gruithuisen, in the same manner as I believe it very possible that you conceived the project in litigation, without any communication with either the one or the other. I still have one of the little watchsprings, for which you have since substituted the forceps of Franco's relation: you let it drop in my room, when you came to show me your instruments; with which, most assuredly, you could *not* have performed one of those brilliant operations of which M. Civiale made us witnesses.

"How much I regret that I cannot reconcile you to each other! You are both honourable men; well-informed and zealous physicians. My happiness would be to bring you together amicably. But your article, of I know not what journal, and your printed reclamation, deprive me of all means to do it. I shall perhaps be

reduced to the necessity of submitting explanations to the Academy on Monday next, which will not be to your advantage. Behold to what one rash step leads! *But the written proofs which I have to furnish against your pretensions* will not alter the esteem I feel for you, nor abate the attachment for you of one of your oldest predecessors.

(Signed)

"PERCY."

"9th April, 1824."

In this country, the wording of the programme of prizes for 1826 has been resorted to, in order to maintain M. Leroy's pretensions. The phrase is as follows: "As a title of encouragement, 2000 francs are granted to M. J. Leroy, who, the first, in 1822, made known the instruments invented by him, and which he has since endeavoured to improve." The Academy certainly could not have meant the first lithotritic apparatus which had been invented and executed for the crushing and extraction of calculi from the bladder; for we have seen that the same Academy declared, by its commission, two years before, that "M. Civiale had arrived the first," and that "he had his lithotritic instruments constructed in 1819;" and we have also seen that M. Leroy had a knowledge of M. Civiale's labours, having read his memoir at Baron Percy's house. This memoir contained the descriptions and drawings of three instruments: the first consisted of four articulated branches; the second represented a pouch; and the third was formed of elastic branches, and a stilette or perforator, and had some resemblance to the bullet forceps of Alphonso Ferri. These facts are established by the report of the commission, as well as by the avowal of M. Leroy himself.

I have brought to a conclusion this part of my task, and most assuredly it was not without great reluctance I entered upon it at all. Neither science, nor humanity, nor professional dignity, can derive much advantage from the agitation of questions merely personal. For my own part, I had fully resolved to abstain from such discussions. It was not until it had been attempted to dispossess M. Civiale of the merit due to him, that I felt imperatively called on to defend his just rights. I have, I trust, fully shown how unfair those attacks upon his character have been: their virulence will, I hope, excuse any hasty expressions I may have made use of in the warmth of controversy. It has been to me a really unpleasant duty. I have endeavoured to render justice where justice was due. I was aware, in defending the cause of Dr. Civiale, that I was advocating the cause of truth. I could have had no other inducement.

I did not act from any concealed or personal motive. I have been his pupil and assistant, it is true; but I am not therefore *addictus jurare in verba magistri*; and a pledge of this nature would have been silly in the extreme, if M. Civiale's rights had not been proved to be incontrovertible. I cannot help expressing my regret that, in my endeavours to establish those rights, I have been under the necessity of impugning the pretensions of others.

I entertain no feeling of jealousy against any person whose name is connected with lithotrity. On the contrary, I declare myself, as soon as any real improvement shall have been made in the lithotritic apparatus, not only ready, but eager to adopt it. I bear willing testimony to the high talents of M. Leroy; and I fully concur in the opinion expressed by Baron Percy, that he is a zealous and well-informed physician.

The preceding observations establish,

1. That the divers elements of lithotrity have existed in the remotest times; but that we owe the creation of a rational and applicable method to Dr. Civiale.

2. That Dr. Gruithuisen is not the author of this method.

3. That M. Leroy, whose labours may have been independent of M. Civiale's, is not the author of this method.

I have now redeemed the pledges I made to the profession and the public elsewhere, and no light motive shall induce me to obtrude on either with respect to this controversy in future.

EXPLANATION OF THE PLATE.

Fig. 5, represents Alphonso Ferri's bullet forceps. This drawing, although it differs much from the one in the author's work published at Lyons in 1553, is the most generally known as Ferri's bullet forceps.

— 6. This bullet forceps, with the branches expanded.

— 7. Ambrose Pare's gimlet, for the perforation of calculi in the urethra.

— 10. Fabricius Hildanus's forceps, for the extraction of calculi from the urethra.

— 12. The internal or branch tube of the same.

— 15 and 16. Daniel Episcopus's pincers, for the extraction of calculi placed beyond the curvature of the urethra.

— 17, 18, and 19. Sanctorius's instrument for the extraction of calculi from the urethra and bladder.

— 20. Sir Astley Cooper's curved forceps for the extraction of calculi from the bladder.

— 21. Franco's *Quadrupulus vesicæ*.

— 22. Tube proposed by Gruithuisen for irrigating the bladder.

The lateral prolongation at the extremity was destined to keep the calculus from contact with the open tube.

Fig. 23. A thick metallic canula, with a conductor bearing a conoid point to render its introduction into the bladder easy. This conductor is terminated by a ring at the opposite extremity.

— 24. A sound, more than three lines in diameter, which Gruithuisen proposed for young subjects.

— 25. A canula, through which a steel rod descends: this rod passes through several circular metallic plates, which prevent it from vacillating. At the outer end a pulley is fixed, at the other the crown of a trephine.

— 26. The extremity of a canula, with a lance-pointed stilette. A wire noose, destined to seize the calculus, is passed through the canula.

— 27. The extremity of a canula, with a stone scissors.

— 28. A crook for the extraction of bougies from the urethra.

— 29. A crooked stone breaker. It was destined to crush small calculi against the open end of the canula.

— 30. Two isolated conductors, for the employment of Galvanism.

— 31 and 32. The instrument with watchsprings, proposed by M. Leroy in 1822.

— 38 and 39. The instrument with elastic branches, adopted by M. Leroy.

BUFFY COAT IN THE BLOOD.

An Attempt to explain the principal Means which the System adopts in its Efforts to relieve itself, when labouring under Affections attended with increased Action of the circulating Fluids; more particularly as they are connected with the existence of the Buffy Coat in the Blood. By ANDREW BLAKE, M.D. Member of the Royal College of Surgeons, and Surgeon to his Majesty's 7th Regiment of Dragoon Guards.*

IN that excellent Dictionary of Surgery published by Staff-surgeon COOPER, the nature and properties of the buffy coat of the blood are spoken of in very ambiguous terms; so much so, as to leave the subject enveloped in considerable doubt. Its author, in speaking of this substance, under the head of inflammation, says, "In some cases those changes in the blood," (alluding to the production of the buffy coat,) "are deemed a more infallible proof of the existence of inflammation than the state of the pulse itself: they are, however, only a criterion of some unknown operation going on in the system; for the blood taken from a pregnant woman is always found to present the same ap-

* This paper formed a part of the author's annual report to Sir James M'Grigor, written last December.

pearance." The circumstances, also, of the pulse being generally small in peritoneal inflammation, while the buffy coat is found to abound in the blood; and, on the contrary, that, during typhoid diseases, though it may be full and quick, yet true buff cannot be detected; and further, that this substance will be discovered in it at one period of an inflammatory affection, and not at another; and, lastly, no satisfactory explanation of such phenomena being found even in the celebrated works of Hunter, Hewson, Sir Everard Home, Scudamore, &c. have all led me to consider the subject particularly, and to endeavour, in the following pages, to explain the cause of its formation, as well as the uses which it performs in the animal economy under the various circumstances in which it is found to exist.

By the term inflammation it is generally understood that vascular action is increased in the whole or some part of the system, and is accompanied by all or some of the well-known symptoms of that disorder.

It may be divided into three orders, according to the extent of the parts engaged: viz. into *general inflammation*, when the whole system is affected; *mixed*, when a topical affection is accompanied by general symptoms; and *local*, when the disorder is confined to a part, without the participation of the whole system.

These may again be divided into sthenic and asthenic genera, as their nature may be. I would cite pure synocha* as an instance of general inflammation of the sthenic genus, and typhus as the reverse of it; while pneumonia affords an example of sthenic inflammation of the mixed sort, and phlegmon of one purely local.

Some of these affections, particularly of the mixed and local orders, may be still further subdivided into the acute and chronic species. I would quote the pregnant state as an instance of chronic phlegmasia, or mixed inflammation of the chronic species, for reasons hereafter to be given; while most indolent tumors exemplify the local affection of the same nature.

When we shall have examined into the causes, symptoms, and effects of every species of inflammation, from the general, or what is called fever, to the simple whitlow, which may serve to exemplify the purely local affection, we shall find that they are all the effects of efforts which nature makes to relieve the system in general, or some part of it

* I mean the disease described under this head by systematic writers; of which, however, I must confess I never saw an example.

in particular, from the consequences of the application of some offending cause. Thus, inflammatory fever may be excited by cold, or other causes which suppress the accustomed evacuations: this induces local congestions, to relieve which general reaction ensues, and constitutes the disease in question.

This reaction, or fever, then, is the effort which nature makes to relieve itself, while endeavouring to re-establish suppressed evacuations. The specimen of local inflammation, as whitlow, already quoted, will likewise be found to be an effort which nature has made to rid itself from some stimulus, such as a splinter of wood beneath the nail, &c. These efforts will be sthenic in the direct ratio of the natural strength and vigor of the system, or particular parts affected; modified, however, by the destructive powers of the offending causes applied to them. In a healthy subject, when the causes are moderate, sthenic general inflammation, or inflammatory continued fever, is excited; whereas, when the causes which have been applied to the system are highly concentrated and intense, as in some forms of malaria, its powers are so much weakened by their application as to render it incapable of making similar salutary efforts; and death, or asthenic general inflammation, is the consequence, manifested by those genera of disease termed typhoid or remittent fevers.

The system appears likewise to be governed in her salutary efforts by a series of general laws, the whole or some of which are called into action in every species of inflammation, whether local or general; and besides the influence they exert in the increase or decrease of the various secretions, with a view to the re-establishment of the equilibrium in the circulation, they call to their assistance other active processes, some of which act diametrically opposite to each other in their immediate effects. In cases of local inflammation of the sthenic genus, such as phlegmon, and of mixed, as pneumonia, the action of the absorbents is particularly put in requisition, in order either to remove the offending body, or, if necessary, to insulate the affected parts, so as to prevent its admission into the system. While this action, apparently of a destructive nature, is undertaken, the protecting powers of the system become alarmed, and, in order to be in readiness to repair the damage which may be done to it, prepare in the blood the means of reproduction, by inducing the formation of the buffy coat, to enable it to deposit coagulable lymph, wherever it may be found necessary to do so. We observe these two processes,

one of increase and the other of decrease, particularly active even in the very common but necessary operations of resolution, ulceration, suppuration, granulation, adhesion, and effusion. Of all the processes which nature has instituted for the purpose of protecting itself against the consequences of inflammation, there is none which exercises a more important office than that which induces the buffy coat in the blood. By it the progress of inflammation is arrested or circumscribed, either by the deposition or effusion of coagulable lymph. We therefore find that, as soon as the system has had sufficient time to sympathize in a case of mixed inflammation, or phlegmasia, for example, what is termed the buffy coat is developed; but it appears that a certain time is necessary for the accomplishment of this object. Thus, blood drawn at the commencement even of pneumonia may not exhibit it. I have often observed this, but more particularly in a very recent case. In it, as long as the system appeared to be prevented from acting with freedom, owing to congestion of blood in the lungs, no buff was observed: I abstracted two pounds in the morning and two pounds more in the evening, with manifest advantage to the general symptoms, but without finding buff. In the course of the next day, having deemed it necessary to have recourse once more to phlebotomy, the blood exhibited the strongest indications of inflammation, as well by the presence of the buffy coat, as by what is termed its cupped appearance. This case would show that, although, when the buffy coat is exhibited by blood drawn in diseases accompanied by other symptoms of inflammation, we are to regard its presence as an absolute proof of the existence of that disorder, either in an acute or chronic form, at the same time its absence, under similar accompanying circumstances, should not lead us to form a contrary conclusion, and hence, perhaps, omit one of the most certain means of counteracting inflammatory action, namely, general or topical bloodletting.

Nature, in the developement of the buffy coat, not only furnishes itself with means of resisting disease, but of assisting most materially in the operation of perpetuating our species. In the state of pregnancy we observe many of the phenomena characteristic of inflammation, so much so as to lead me to consider it, though a natural and healthy process, as a variety of chronic phlegmasia. In it we observe acceleration of the pulse and local distention, attended, generally speaking, with marks of plethora. We also see the absorbent vessels called into action to detach the ovum,

and next we find that the system arms itself with coagulable lymph, in what may be called a free state, as is exemplified by the buff exhibited when blood is taken from pregnant women. A very little consideration, however, will lead us to see that this peculiar state is only a very salutary one, and that it is highly necessary to enable the system to supply coagulable lymph, which is indispensable, as well for the adhesion of the ovum to the uterus, on its arrival within its cavity, as to provide for the gradual and daily increase of the fœtus, by the fixation (if I may use the expression) of the free lymph during the developement of its various parts.

We see, then, that the presence of the buffy coat in the blood is only the effect of a salutary effort of the system, either to resist disease, to repair its consequences, or to act a most important part in that most essential process of the animal economy, the perpetuation of our species. It will also have been seen that, although its existence, when accompanied by other marks of inflammatory action, proves the surest and best test of the propriety of exercising sanguineous depletion; yet its absence, when other symptoms of this acute affection manifest themselves, ought not to deter us from having recourse to that most efficient remedy.

Having thus far considered that power of the system exemplified by the developement of the buffy coat in the blood, or what may be termed the material for reparation or reproduction, let us now take a view of a process, which, though it appears to be antagonist to the one just described in its mode of effecting its purposes, is its great ally in the ultimate result which they are both destined to attain: I mean the action of the absorbents in removing superfluous matter, or even in inducing ulceration where nature may wish to insulate a part, or relieve local determination, by allowing effusion to take place from parts labouring under congestion. It would seem that nature, in its preservative efforts, is influenced by a species of instinct arising out of an association of sensations, which calls her resources into action, in a certain order of succession. For example, as soon as tension or swelling takes place, and that the sensation it causes is experienced, the absorbents are called upon to act; soon after which, provision is made in order to be in readiness to reconstruct what they may have carried away, by the developement of the buffy coat in the blood. We have a curious example of this even in some cases of dropsical swellings: *distention** in such instances is generally

* Distention to a certain extent exerts the same stimulating influence on the absorbents as pressure is known to do; but, if it be increased immode-

supposed to be caused by an increase of action in the exhalent vessels, to counteract which the absorbents are naturally called upon to use their endeavours to correct the effects of this deviation from healthy action; by association, their ally, the buffy coat, is invited to come to their assistance; and hence may have arisen the idea that dropsy depends on an inflammatory state of the system in general.

Query: May not the buffy coat in this instance be of service in rendering the blood less capable of passing through the capillaries, and thus more likely to retard exhalation?

When a certain action is once induced in a part, producing swelling and determination of blood to it, we often find that, notwithstanding all our endeavours to resolve or discuss such a swelling, as in cases of chronic glandular enlargements in the groin, for example, suppuration will ultimately ensue. This may be explained on a similar principle to that on which John Hunter accounts for the impotence of mercury, which is sometimes experienced by its not preventing the occurrence of secondary symptoms of the venereal disease, if not used early; namely, that when the disposition to induce them is once formed, nature will not be thwarted in her intentions.

I have more than once observed the truth of this axiom

ately, instead of exciting, it paralyses, their action. In this way may we account why general bleeding, by lessening the volume of the circulating mass, and thereby relieving over-distention, may prove apparently, and in some cases really, serviceable in certain stages of dropsy. Magendie drew conclusions of the same practical utility from another chain of reasoning. He supposed that the action of the absorbents was diminished by the existence of plethora, and vice versa. Thus, when he induced artificial plethora by the injection of water into the veins, he could apply poisons to the pleura and stomach almost with impunity; while, on the contrary, when he bled the subject of his experiments, so as to diminish the circulating mass, it very soon fell a victim to the effects of poisonous absorption. Magendie's experiments are only further proofs of the wisdom with which nature has instituted general laws for the preservation of life. It appears also natural that, when the vessels are distended with water, or that plethora exists, she must feel conscious of the impropriety of increasing the action of the absorbents, and vice versa. On the same principle, we see the lungs increase or decrease their consumption of oxygen according to the nature of our aliment.

Dr. Paris, in his *Pharmacologia*, vol. i. 6th edition, page 213, says, "Mr. Spalding, the celebrated diver, found that, when he ate animal food and drank spirits, he consumed in a much shorter time the oxygen in his diving bell, and therefore confined himself to water and vegetables when following his profession. Nature, in this case, exercises her discriminating powers, arising out of an association of sensations, and finding that animal food and spirit contained less oxygen than vegetables and water, induces the lungs to endeavour to abstract from the atmosphere more oxygen when the system is supported on the former than on the latter kind of diet. A knowledge of this circumstance is essential, in order to enable us to explain the rationale of our dietetic regulations in disease of the respiratory organs."

exemplified in cases of soldiers who had contracted the venereal disease, and who had remained without treatment for sometime, owing to their absence from the regiment. In such cases, mercury, though administered with care, did not, generally speaking, prevent the appearance of secondary symptoms. On the same principle, then, should the first means employed not succeed in arresting the progress of inflammation, and should nature determine on, or form the disposition to having recourse to ulceration and suppuration, in cases of glandular swellings, it will be found extremely difficult, and very often impossible, to avert her from her purpose.

In consequence of this difficulty, and from having observed the good effects of repeated blisters, when applied to indolently inflamed tumors, which I imagine could only have acted by inducing ulceration and suppuration, and thus artificially causing, or anticipating what nature intended to perform; I was led to adopt the practice of exciting ulceration of the integuments immediately above such tumors, by the application of the potassa fusa, and in this way I have succeeded in discussing, quickly, tumors which otherwise must have been obstinate and tedious. When an eschar is formed by the potassa, nature, from its perception of the necessity for the absorbents to act in detaching and removing the slough, calls them to her aid, and, when once they are put in action, they appear to take up whatever superfluous matter they find in their neighbourhood, and thus remove the whole of such tumors. By this means, in most instances we avoid the painful, and often slow, process of internal suppuration, and have, in general, only to await the healing of the artificial sore, which proceeds kindly.

Therefore, as we cannot prevent the supervention of ulceration and suppuration, when the disposition to it is once formed in the system, we must see the propriety of making an early eschar on the integuments over such tumors.

The moxa and issues, in disease of the hip joint, of the spine, and white swellings, must owe their just reputation to the effects they induce: on the same principles, I would, therefore, propose this application to all buboes and similar swellings, as soon as the other means usually prescribed in such cases appear to have failed in inducing resolution, by which we shall generally find that internal suppuration will be avoided.

When the absorbents are once roused into action, they do

not confine themselves, as I before mentioned, to the mere extent of the eschar, but extend their influence to the neighbouring parts, in the same way as the system acts when it sets about replacing the loss of blood induced by a small bleeding from the arm; not ceasing its efforts exactly when it has replaced the quantity of blood lost, but continuing to prepare more, and to induce even a fuller state of the vessels than existed previous to the evacuation; thus proving the truth of the popular observation that "bleeding fattens."

By rubbing a small extent of surface with the point of a piece of the potassa fusa, an eschar is very soon formed, and the pain attendant on this operation may then be instantly arrested, by pouring from a little elevation a stream of cold water on the part. The cold water not only causes the pain to cease, but seems to accelerate the death of the part exposed to the action of the potassa. Should the water be slightly acidulated, it will tend to hasten these results.

In typhoid and remittent fevers, and all diseases of increased vascular action, of the asthenic genus, we find that, although the absorbents may be called into action in the efforts which nature may make for the preservation of the system, and that ulceration, or even passive hemorrhages, may be the consequence, yet she is unable to develop the characters of the buffy coat in the blood. On the contrary, principles of a directly opposite nature are found to predominate in it; such as an excess of carbon, and of all other elements which are wont to be separated from the circulation by a vigorous and healthy perspiration.

Thus we observe a marked difference to exist in the qualities of the blood in sthenic and asthenic disease. In the latter affections another mode of defence is set up: a succession of paroxysms, more or less distinct, are induced, during which nature strains every nerve to re-establish, by these means, the lost equilibrium of action in the system.

From our observation, therefore, of the different modes by which nature attempts to relieve herself from the effects of the various diseases by which she is liable to be assailed, in the form of increased vascular action, as well as from our knowledge of the very opposite principles developed in the blood, or "*pabulum vitæ*," during these struggles, we may lay it down as a general principle, that in sthenic affections, while we ought never to lose sight of the other important auxiliaries which therapeutics point out for their treatment, our chief reliance should be placed on blood-

letting, local or general, or both, according to the nature of the case.

In the asthenic genus, on the contrary, or what may be termed paroxysmal diseases, bleeding should only be instituted to relieve congestion, and that not without a considerable degree of caution; while our principal efforts should be directed to the re-establishment of the natural secretions of the system, and to support it by the administration of tonics and mild stimulants, so as to assist in the periodical struggles it may make to get rid of the superabundance of asthenic principles with which the blood abounds in such cases, and to enable it, through the instrumentality of the lungs and other important organs to recover the due proportion of oxygen and vigor which are necessary to the state of health.

Ipswich Barracks; Sept. 1st, 1829.

TUMORS IN THE THORAX.

Case of Tumors in the Thorax, connected with Renal Calculi. By
C. J. ROBERTS, M.D. Physician to the General and to the South
London Dispensaries, &c.

JOHN SADLER, æt. forty-three, coal and timber porter, was admitted a patient of the South London Dispensary, on the 8th July, 1829. He was first seen, in my absence, by one of the pupils, who ordered him a blister to his left side, and some aperient medicine. Three days afterwards, my attendance was requested at his own home, he then being unable to leave his bed. I found him complaining of a very acute pain under the angle of the right scapula, which was much increased by pressure, and so severe at intervals as to cause him to cry out. The tongue was clean; the pulse soft, rather full, but not exceeding seventy-six in number; his countenance was sallow, and the conjunctiva somewhat suffused with bile. I prescribed for him calomel and opium.

In three days his mouth was sore, but the pain remained nearly the same: he had perhaps an interval of ease for two or three hours in the twenty-four, but never longer.

On the 20th of July, (four days after,) the soreness of the gums having subsided, and the pain continuing, I was induced to repeat the mercury; and, in addition, twenty leeches were applied to the part.

On the 22d July, the mouth again became somewhat sore, and the mercury was suspended, on account of his petulant

complaints; but was resumed on the succeeding day, and the leeches were reapplied.

On the 25th, the mercury, notwithstanding its being combined with opium, produced diarrhœa, and it was discontinued. As he had found the greatest relief from the topical abstraction of blood, I ordered him to be cupped upon the part, and to lose sixteen ounces of blood.

On visiting him on the 28th, I found the cupping had not caused the slightest alleviation of the pain; and, at his earnest request, he had fifteen more leeches applied to the back. He continued nearly in the same state for a week, when the pain was so much aggravated, that twelve more leeches were employed, and ten grains of *Pil. Sapon. cum Opio* were ordered to be taken at bedtime every night.

On the 8th August, twelve more leeches were applied; and afterwards the part was rubbed with the *Ung. Tart. Antim.*, but without relief.

9th.—Twenty-four more leeches were again ordered, and a powder of calomel, opium, and tartar emetic, to be taken at bedtime. During the whole of this period the pulse never ranged higher than ninety, and the tongue was uniformly clean.

From the interval between the 11th and the 19th of August, fifty leeches were used, at his own earnest desire, and the opium was also continued.

On the 21st August, a blister was again applied, but without effect. He was getting much thinner, and he now fancied he could feel an abscess about to point; in which opinion he was confirmed in consequence of a practitioner in the neighbourhood, who had formerly attended him, having told him that he had no chance of living unless the tumor was opened, and a vent given to the matter. On hearing this, I requested my colleague, Mr. AMESBURY, to visit him, who perfectly agreed with me that it would not be safe to use the lancet, and that it would be better to apply a poultice. This plan was pursued very strictly, until he complained that the weight of the poultices inconvenienced him; when fomentations were substituted.

The same practitioner who recommended puncturing the part again saw him, and wished that the operation should be performed; but the patient had become satisfied that it would be of no service.

From this time he sank gradually, and died on the 8th of September.

About three weeks previous to his decease, he complained

that his urine was small in quantity, and caused slight smarting pains on being passed. It was very high coloured, depositing a copious reddish sediment, and was loaded with mucus; but no decided nephalgic or lithic symptoms ever showed themselves.

On opening the body, the general appearance of the intestines was healthy, and, on tracing them, no marks of disease were evident. The liver, which we had supposed to be the principal seat of the mischief, was found to be healthy, except one or two small tubercles, but which were so minute as not to allow us, to presume, for one moment, that these could have been the cause of the violence of the symptoms. The gall-bladder was very large, and full of very filthy black bile, to the extent of two ounces, but bore no traces of inflammation or disorganization.

The right kidney was increased to nearly or quite four times its natural size, and contained within its infundibula a quantity of stones, of different dimensions, varying from a small nut to that of a tare. They were of a black colour, and some of them were covered by a deposit of calcareous matter of a lighter colour, nearly approaching to white, and very friable. The left kidney was much diminished in size, and was studded with distinct spiculæ of bone, and patches of ossific matter, throughout its substance. There was also a stone, nearly the size of a large horsebean, impacted in one of the infundibula.

The heart was quite healthy. The lungs were entirely sound, and so perfectly did they collapse on the thorax being cut into, that they lay contracted into a very small compass upon the sides of the vertebræ. On looking at the back part of the right lung, two tumors were discovered lying on the transverse process of the dorsal vertebræ, and covered by the pleura costalis. The upper one was the smaller, and occupied the space between the fourth and seventh dorsal vertebræ; and the inferior and larger one was separated from the superior one by the space of one rib, and extended from the eighth to the eleventh dorsal vertebræ. These tumors were partly ligamento-cartilaginous, with ossific deposits, together with a very small quantity of dark-coloured pus. The bodies, and a portion of the transverse processes of the vertebræ upon which they rested, were roughened, and absorption of them was commencing. The sixth rib was dislocated, the head having been already absorbed.

The bladder was somewhat thickened, and its internal

coat rather more vascular than usual, but not sufficient to have attracted attention, had that not been previously excited by the calculi in the kidney.

I was induced to believe the patient was afflicted with inflammation of the liver, which was about to terminate by suppuration, from the constant pain about the lower angle of the scapula, and from the sallow countenance and injected state of the conjunctivæ. My opinion was also strengthened from his intemperate habits being notorious, and also from his having been constantly exposed to the weather. He never complained of pain higher up in the course of the spine than about the ninth rib, and this was aggravated by firm pressure being made with the hand. Towards the termination of life, very gentle touching of the part would excite pain in it for hours. He lay constantly on his left side, or upon his face. The circumstances which most perplexed me were the very great steadiness of the pulse and the cleanness of the tongue; the former generally not varying more than from seventy-six to eighty-four until within a very short period of his decease, and then they did not exceed one hundred; and the tongue never having been under any circumstances loaded with fur.

The pain in the lumbar region was never sufficient to call our attention to it, and, when the hand was pressed on the spot, he did not complain in a manner to lead to the inference that so extensive a disease existed in its neighbourhood. In fact, the whole of the pain by which he was so much distressed resided in the tumors within the thorax. That neither opium alone nor in conjunction with calomel should mitigate his sufferings, cannot create surprise; but it was rather a curious fact that cupping, which abstracted the blood from the part in much greater quantity and with more rapidity than the leeches, should fail in producing as great relief: perhaps, it may be presumed that the pressure of the cups caused more uneasiness than the abstraction of the blood did good. The pain must have been caused by the tumors pressing upon the nerves in the vicinity.

The tumors in the thorax were attributed by his wife to his having been kicked in that part by a man with whom he was fighting, some years since.

The calculi were analysed by my friend, Mr. HENNELL, of Apothecaries' hall, who considered them to consist of phosphate of lime, and the matter deposited round them to be the ammoniaco-magnesian phosphate: they are in the collection of the Medical School in Aldersgate street.

HYDROSTATIC TEST.

On the Hydrostatic Test, and other Proofs of the Extra-uterine Life of the Child. By ROBERT ARROWSMITH, M.D. Coventry.

I AM induced to offer some remarks on the subjects adverted to in the title of this communication, from having observed the doubtful or contradictory opinions expressed by some members of the profession, in a case of supposed infanticide, which not long since became the subject of a coroner's inquest in London: and the doubts experienced on that occasion, as in most others of a similar nature, related to the proofs of the extra-uterine life of the child. To persons accustomed to study the nature of the anatomical and physiological evidence which we now possess on this subject, it appears somewhat extraordinary that discrepancies should still be found in medical testimony; and it is to be apprehended that the doubts and difficulties which are generally experienced are the consequences rather of imperfect preparation on the part of the witness, than of the questionable nature of the proofs with which anatomy and physiology have supplied us.

Both in a civil and criminal point of view, inquiries concerning the extra-uterine life of the child are important. With regard to the former it may be observed, that in almost every country, England and America excepted, the audible crying of the child is the great test of life relied on; but in these countries a child has been decided to have been born alive who has made certain muscular movements, without, however, uttering audible sounds. In the provisions of the English law, concerning *a tenant by the courtesy of England*, it is understood that "where a man marries a woman seised of an estate of inheritance, and has by her issue born alive, which was capable of inheriting her estate, he shall, on the death of his wife, hold the lands for his life, as tenant by the courtesy of England:" and with regard to the proofs of its being born alive, Blackstone remarks, "Some have had a notion that it must be heard to cry, but that is a mistake. Crying, indeed, is the *strongest* evidence of its being born alive, but it is not the *only* evidence;" and Coke observes, "If the child be born alive it is sufficient, though it be not heard to cry, for peradventure it may be born dumb." "Crying is a proof that a child was born alive; and so is motion, stirring, and the like."* Such proofs must be established by the testimony

* Vide BECK's Medical Jurisprudence.

of by-standers, and their existence is incapable of particular elucidation by a medical witness. But whether such proofs of life be well founded or not, physiologists alone can decide; and it is highly probable that the prevailing opinion among them will always influence the verdicts of juries. That crying or respiration is the only infallible sign of life is not physiologically true; for, as children are frequently born without any indication of life, and are oftentimes resuscitated after a considerable interval, either spontaneously or by artificial means, it is manifest that the state of such children during this interval must be one of apparent death only. And, if it be alleged that the movements which children under such circumstances occasionally exhibit show only that the muscular fibre has not yet lost its contractility, the same may be affirmed of respiration, which is essentially a muscular action. What would be the decision of a jury in a case where the *vagitus vaginalis* had occurred, and the child afterwards born dead? The hydrostatic and other tests would here concur, with the testimony of the by-standers, to demonstrate that the child had performed some of the functions of independent existence; but, according to the principle laid down, "*mortuus exitus, non est exitus*," the father could not inherit.*

But it is chiefly in connexion with criminal jurisprudence that the inquiry into the signs of the extra-uterine life of the child has been prosecuted. In concealment of pregnancy, the life of the child at birth is viewed as an aggravating circumstance, and hence the negative evidence is very important to the prisoner. And, in trials for infanticide, whilst the proof of the child having been born alive furnishes only presumptive evidence in support of the charge, satisfactory evidence of its having been stillborn will refute the charge in the face of all moral testimony. And assuredly the consideration that a system of proof can never establish guilt, but may often rescue innocence from suspicion, (as is the case with the various tests of extra-uterine life,) ought to be some recommendation of its study. I say can never establish guilt, because if the life, after birth, of a child be ever so convincingly ascertained, evi-

* CHAUSSIER, feeling something, I presume, of the absurdity of applying such finespun distinctions to political purposes, proposed to the French minister the following article: "Est reconnu et déclaré viable, apte à jouir des privilèges de la société, l'enfant dont la tête est bien conformée, qui, au plus tôt, 36 heures après sa naissance, est présenté vivant et vigoureux à l'officier de l'état civil, qui l'inscrit aussitôt sur ses registres, avec les prénoms qu'on lui donne, et les qualités des parens et des personnes qui le lui présentent."—*Mémoire Médico-legal sur la Viabilité de l'Enfant naissant*. Paris, 1826. P. 30.

dence of violent death, of criminal negligence, or wilful ill-treatment, is required to sustain the charge of infanticide.

There are three different organs in the fœtus, which, in its transition from the condition of the fœtus in utero to that of independent existence, undergo certain changes, which changes remain after death; so that their unaltered condition constitutes a proof of death before birth; their altered condition, the death of the child during or after birth; namely, the organs concerned in respiration; the circulatory apparatus peculiar to the fœtus; the digestive apparatus, with the urinary bladder and rectum. The examination of these collective signs is called the "*Docimasia Biomantica*," and is divided into the *Docimasia Respirationis*, the *Docimasia Sanguinis*, *Circuitus*, and the *Docimasia Digestionis et Excretionum*.

1. The *D. Respirationis* comprehends an inquiry into the cavity of the thorax: the colour, consistence, the absolute and specific weight, and the circumference of the lungs, together with the fallacies to which they are respectively liable: namely, respiration before or during birth; inflation; the emphysema pointed out by Schmidt and Chaussier; hemorrhage; and a morbid or decomposed state of the lungs.

1. The transverse diameter of the thorax is estimated by measuring from the intercostal space of one side to that of the other, taking, of course, the widest diameter; the direct diameter, by measuring from the lower end of the sternum to the body of the opposite vertebra. The level to which the arching of the diaphragm rises, is also to be remarked. Various circumstances influence the capacity of the thorax; as, for instance, the degree of maturity of the fœtus; perfect or imperfect respiration; the plumpness of the child, &c.

In mature fœtuses, and in premature ones also which are "*viable*," the transverse diameter of the thorax is from two and a half to three inches; the direct diameter from two to two and a half inches; and the arching of the diaphragm rises to about the fifth rib.

In children who have breathed imperfectly, the transverse diameter is from three to four inches; the direct diameter from two to three and a half inches; and the arching of the diaphragm rises to between the fifth and sixth ribs.

In children who have breathed perfectly, the transverse diameter is from three to four and a half inches; the direct diameter from three to three and a half inches. The level of the arching of the diaphragm is at the sixth rib, or between the sixth and seventh ribs.

To this general rule there are exceptions. The thorax may have a larger diameter, from being naturally but unusually spacious; or it may be increased by various morbid processes, as by inflammation, or collections of watery fluid; by inflation of the lungs of a stillborn fœtus; by breathing before or during delivery; from emphysema, or from development of gases by putrefaction.

It may have a smaller diameter, in consequence of malformation, or from death of the fœtus by hemorrhage; from a general tabid state of the body, or from an advanced degree of putrefaction.

2. With regard to the *colour* of the lungs, it may be stated, first, that, in fœtuses which have not breathed, they are of a dark red, sometimes inclining to the brownish red of the liver, or the bluish red of the thyroid gland; and are in general darker posteriorly, on account of the subsidence of the blood there, from the position of the body.

In stillborn children, whose lungs have been inflated, they assume anteriorly the pale red colour of the thymus gland, and partially, particularly posteriorly, the reddish brown colour of the liver, or bluish red of the thyroid gland.

In children after imperfect life, (that is, in those who, by involuntary motions, have given signs of life, without breathing,) the lungs are of a dark red colour, inclining to brown or blue, whilst here and there a few cinnabar-red spots or lines are perceptible.

In those who have breathed imperfectly, or only for a short time, the lungs, on the anterior surface, are of a pale red; on the posterior surface, dark red; whilst, in different parts of the lungs, larger and more thickly-set patches, of a cinnabar-red colour, are visible.

In children who have breathed perfectly, and lived a longer time, the lungs are of a pale red, with numerous patches and lines of cinnabar-red; posteriorly, they present a dark red colour, owing to the subsidence of the blood.

In winter particularly, but even at other periods of the year, the lungs, during inspection, will become light coloured, from the influence of the air.

3. In stillborn fœtuses, the substance of the lungs, with respect to *density*, is every where compact like liver, and does not crepitate when cut; bubbles of air cannot be made to ascend by pressure under water; nor, even by means of a magnifier, can any cells be discovered distended with air.

In dead-born children whose lungs have been inflated, in those with imperfect life, or who have made some few in-

spirations in the womb, and in those who have breathed imperfectly, there are generally found, in the upper lobe of the right lung, several insulated groups of cells, dilated with air. In these situations the substance of the lungs is expanded, and crepitates* under the knife; the other parts are still compact, and yield no air bubbles on pressure under water. Where the cells appear dilated, air bubbles, though fine, may be pressed out.

In children who have respired perfectly, innumerable cells, distended with air, are visible over the whole surface of the lungs, united in the form of insular groups; the substance of the lungs is expanded and spongy, and crepitates audibly; and, by pressure under water, air bubbles, with froth, readily appear.

The following exceptions to the above may be enumerated: In death from suffocation after complete respiration, the lungs are found more or less compact; after death from hemorrhage, they are found flaccid. In œdema of the lungs, or when they contain pus, they are doughy. The dropsical yield water or whitish-gray foam; those whose compactness is the result of suffocation, blood, or a thick palish-yellow fluid heavier than water.

4. Before proceeding to ascertain the *absolute weight* of the lungs, it is necessary to tie the large cardiac vessels, together with the trachea, near the origin of the ductus arteriosus; the vena ascendens, and the two pulmonary arteries. The quantity of blood which the lungs contain may be ascertained by dividing the lungs into small portions, and subjecting them to considerable pressure.

Ploucquet proposed to compare the absolute weight of the lungs with the weight of the body; but the latter has been found so variable as to render this test of no value. On the contrary, the length of children is liable to much less variation; and hence Professor Bernt proposes to compare the weight of the lungs with the length of the body. The following table exhibits the general results which he has obtained from this comparison.

* I am aware of the discovery assumed by M. PIEDAGNEL, that the lungs never crepitate except when affected with general or partial emphysema. If such were the fact, emphysema must have been present in all the children examined by M. BERNT; a conclusion not very probable. But, conceding the accuracy of M. Piedagnel's opinion, it rather confirms than militates against the inference from the crepitation of the lungs on the present occasion, as such emphysematous state is necessarily connected with respiration, either natural or artificial.—*Edinburgh Med. and Surg. Journal*, c. 223.

Average absolute weight of the lungs of stillborn children.

Length.	Males.	Females.
From 15 to 18 inches	3viii ss.	3vii j.
18 to 20	3ix.	3viii ss.
20 to 22	3ix ss.	3ix.

The average absolute weight of the lungs of children who have respired imperfectly, amounts to, or even exceeds by some grains:

Length.	Males.	Females.
From 15 to 18 inches	3xii j.	3xij.
18 to 20	3xiii ss.	3xii j.
20 to 22	3xiv.	3xiii ss.

The average absolute weight of the lungs of children who have breathed perfectly, amounts to, and even may surpass by some drachms:

Length.	Males.	Females.
From 15 to 18 inches	3xv.	3xiv.
18 to 20	3xvj.	3xiv ss.
20 to 22	3xx.	3xv.

The exact quantity of blood contained in the lungs cannot be ascertained when it is coagulated. Nevertheless, if the quantity collected does not amount to one drachm, death from hemorrhage may be confidently inferred; and, if it exceed one ounce, congestion may be as safely presumed. If it be watery, we are justified in inferring a dropsical condition of these viscera.

The absolute weight of the lungs may be increased by malformations; by congestion from suffocation or inflammation, or by various other morbid conditions. It may be diminished also by malformation; by anæmia; by hemorrhage from the umbilical cord, or from wounds; by the decomposition of the blood, and its consequent escape by the trachea, &c., or by exudation.

5. With respect to the *specific weight* of the lungs of still-born children, experiments have established that the whole lungs, and every portion of them, immediately and rapidly sink in water; that the slower sinking indicates a previous feeble effort to breathe, or an unsuccessful attempt to inflate such lungs; or a slight degree of emphysema or putrefaction. A higher degree of putrefaction or emphysema, however, or a successful inflation, will cause them to float; but under such circumstances the colour, the absolute weight of the lungs, the condition of the other viscera, and of the body generally, resolve the difficulty; particularly in

conjunction with the circumstance that, in the event of emphysema or putrefaction, the portions of lung, by means of pressure, are rendered incapable of floating.

Observation has shown, with relation to the specific gravity of the lungs of those children who have breathed imperfectly, that, varying with the degree of such imperfect respiration, either the whole or some portion of the lungs (chiefly the upper lobe of the right lung, or some portion of it,) will float. The fallacies recited in the preceding paragraph may intervene here, and require the corrections before named.

The lungs of those children who have respired perfectly float either with or without the heart, altogether or in pieces, and after having been subjected to the strongest pressure. Such a capability of floating may be produced also by the several causes previously enumerated, and are to be obviated by the same means of correction.

6. *Circumference.* The lungs of stillborn fœtuses (both of which, with their rounded surface, lie in contact with the pleura, the right having commonly a greater circumference than the left,) occupy the posterior parts only of the thorax, their anterior borders extending to the pericardium. With their concave surface they cover the posterior half merely of the arch of the diaphragm; the edges are sharp, and the termination of the right middle and left upper lobe form small, ligulate* elongations.

The lungs of new-born children who have respired imperfectly, or the circumference of which has been increased by inflation, occupy, more or less, the sides of the cavity of the thorax: their anterior borders partially cover the sides of the pericardium, and their under concave surface the arch of the diaphragm, in a great measure; their borders, and the ligulate elongations of the right middle and left upper lobes, are partially or every where more obtuse.

The lungs of children who have respired perfectly, fully occupy the lateral concavities of the chest; their anterior borders cover the pericardium laterally, and their under concave surface the whole arch of the diaphragm; their borders are every where rounded, and the ligulate elongations of the right middle and left upper lobes are shorter and more obtuse.

II. *Docimasia Sanguinis Circuitus.* In considering the proofs of extra-uterine life derived from the circulatory apparatus, I shall confine myself to an examination of the

* "Zungenförmig," literally tongue-shaped.

changes experienced by that part of it immediately connected with the heart and large vessels. It will be previously requisite to describe the form and relations of the arterial canal.

The arterial canal (ductus arteriosus botalli,) originates from that part of the trunk of the pulmonary artery where it divides into its two great branches, and running parallel with the arch of the aorta and in contact with it, joins it at a very acute angle. It is about an inch long, of a cylindrical form, with a diameter equal to that of the trunk, and more than double the diameter of the two branches of the pulmonary artery; which latter are equal in thickness to a crowquill.*

1. If the fœtus have breathed for a few moments only, the aperture of the arterial canal, by which it opens into the aorta is contracted, so that the vessel assumes the form of a cone, with its base towards the pulmonary artery.

2. If it have lived several hours, or a day, the arterial canal becomes again cylindrical, but is diminished in length and thickness, equalling in the latter respect a goosequill; and consequently has a much smaller diameter than that of the trunk of the pulmonary artery, but about equal to the diameter of the two branches; which latter are now become enlarged.

3. If the child have lived several days or a week, the arterial canal is reduced in length to a few lines, and its thickness to that of a crowquill; whilst the diameter of the two pulmonary arteries is increased to that of a goosequill.†

4. It becomes entirely closed after an uncertain period : M. Billard says, most frequently after ten days.

But there are occasional exceptions to these general rules. Sometimes the contraction of the arterial canal after breathing is not at its termination towards the aorta, but towards the pulmonary artery; sometimes, although the child has

* Professor BERNT says that the fœtal circulatory apparatus is faithfully delineated in the treatise of KILIAN, ("Abhandlung über den Kreislauf des Blutes im Kinde, welches noch nicht geathmet hat." Karlsruhe, 1826; 4to. mit 10 lithogr. tafeln;) and adds, that the changes effected in these vessels after breathing, which he was the first to discover, are confirmed by the examinations of Kilian.

† The conclusions above detailed were drawn by Professor Bernt from a series of Observations and Experiments, which were published in detail in 1823, (*Experimentorum Docim. Pulm. Hydrost. illustrantium Centuria I.* curante Jos. BERNT, M.D. &c. Viennæ, 1823;) and in the third edition of his Manual of Medical Jurisprudence, published at the same place in 1828, and which is my authority for most of the facts contained in this paper, he adheres to the conclusions he originally formed, and has added the confirmation of Kilian. (*Systematisches Handbuch der gerichtlichen Arzneykunde*, von J. BERNT, &c. 8vo. Wien, 1828; 3te. Auflage.)

breathed feebly, and for a short time only, the arterial canal is of the thickness of a crowquill, and therefore (as in those who have lived several days) is by far smaller than the trunk of the pulmonary artery or aorta.

III. The *Docimasia Digestionis et Excretionum* comprehends the condition of the liver, the stomach, intestines, and urinary bladder.

The liver, as a viscus whose changes with reference to respiration are important and deserving of attention, has been but little examined. Dr. Beck first proposed to ascertain the weight of the liver before and after respiration, and conceived it would be a means of verifying the static test of Ploucquet. Professor Bernt says that Dr. Beck is mistaken in supposing that the principle on which his proposal rests is exposed to no greater practical objections than the test of Ploucquet. He (M. Bernt) has instituted one hundred experiments on the state of the liver, and he gives the following as the result of his inquiries:

1. The situation of the liver and length of the abdominal cavity, are relative to the situation of the diaphragm and capacity of the thorax. The arched surface of the diaphragm in the fœtus protrudes farther into the cavity of the thorax than in newly born children. This relation may be deranged by a relaxation of the diaphragm, from putrefaction.

2. The colour of the liver varies (without reference to the child having been born living or dead,) from reddish brown to dark or blackish brown. The darkest colours are most frequently met with in premature children, or in a congested state of the liver.

3. The edges of the liver project out of the hypochondrium, both in dead and living born children. Its absolute weight in the former (the length of the body being from fifteen to twenty-two inches) was from $\bar{3}$ iiiss. to $\bar{3}$ viiss.; in those which had breathed imperfectly, from $\bar{3}$ iiss. to $\bar{3}$ vij.; and in such as had breathed perfectly, from $\bar{3}$ iiss. to $\bar{3}$ viiiiss.

4. The blood contained was quite fluid or semifluid, for the most part dark red, but sometimes, in dead-born children, light red. The gallbladder was pyriform in those only who had lived several days, and for the most part contained some reddish yellow bile.

5. The ductus arantii was always open during the first days after delivery: later, it becomes contracted, and is generally found closed after the sixth day.

It is almost superfluous to add any thing relative to the

condition of the other abdominal organs. The changes occurring in them are either so slow or so obvious as to require no indication.

It has been well observed by several authors, that, in inquiries into the proofs of extra-uterine life, as in medico-legal investigations of every kind, it should never be forgotten that each proof, considered in itself, and without connexion with others, is necessarily unsatisfactory. But, in proportion as proofs and probabilities are multiplied will fallacy and error be diminished; and if the various proofs mutually support each other, they supply a body of evidence so strong and luminous as to satisfy both the physiologist and the jurist.

It will not be deemed unimportant, perhaps, to subjoin the following compendious summary :

a. The fœtus may be concluded to have died before birth, and never to have breathed.

1. If the transverse diameter of the thorax be from two to three inches, the direct diameter from two to two and a half inches, and the arching of the diaphragm extend to the level of the fifth rib.

2. If the colour of the lungs be dark red, or inclining to the brownish colour of the liver, or the bluish colour of the thyroid gland.

3. If the substance of the lungs have the compactness of the liver; if there be no cells distended with air on their surface; if they do not crepitate when cut; and if they yield no bubbles of air when submitted to pressure under water.

4. If the absolute weight of the lungs, compared with the length of the body, corresponds with the ratio already pointed out in the table (p. 417,) as the average ratio in dead-born children.

5. If the lungs in connexion with the heart, or without it, or every portion of each lung, when divided, rapidly sink in water; and if they are respectively heavier than water by several grains or scruples.

6. If the lungs occupy the posterior part of the cavity of the thorax, extending by their anterior edges merely to the pericardium; and with their under concave surface covering only the posterior half of the arch of the diaphragm; if the borders are thin, and the ends of the right middle and left upper lobes form small, pointed, ligulate elongations.

7. If the umbilical vessels, the ductus arantii, and the other circulatory apparatus peculiar to the fœtus, be pervious; and if the arterial canal have a cylindrical form, with

a diameter equal to that of the aorta, and nearly three times greater than that of the two pulmonary arteries.

b. It may be concluded that the child has lived a short time after birth, and has breathed imperfectly.

1. When the transverse diameter of the thorax is from three to four inches, the direct diameter from two to three and a quarter inches; and when the level of the arch of the diaphragm is between the fifth and sixth ribs.

2. When the lungs are of a dark red colour, sometimes inclining to brown or blue; whilst at the same time they exhibit, in some part or other of the lungs, but particularly in the edges, bright or cinnabar-red spots or stripes.

3. When cells distended with air are visible in the surface of the lungs, (particularly in the upper lobe and edges of the right lung,) collected in insulated groups, and hence immediately connected with compact portions of the substance of the lung; hence also crepitating or not, according to the portion which is cut, and yielding bubbles of air, from pressure under water of the expanded portions.

4. When the absolute weight of the lungs is manifestly increased, in comparison with the length of the body. (Vide p. 417.)

5. When the whole lungs, with or without the heart, sink in water, at the same time that one or other lobe, or several or a few portions, float.

6. When the lungs occupy more or less the lateral parts of the cavity of the thorax; when their anterior edges and the ligulate elongations of the right middle and left upper lobes, are partially or every where become obtuse.

7. If the umbilical vessels, the ductus arantii, and the other circulatory apparatus peculiar to the fœtus, be yet pervious; the arterial canal having, however, a diminished thickness, namely, that of a goosequill, and consequently a far less diameter than that of the trunk, but equal to the now increased diameter of the two branches of the pulmonary artery.

c. It may be concluded that the child has lived a longer time after birth, and has breathed perfectly.

1. When the transverse diameter of the thorax is from there to four and a half inches; the direct diameter from three to three and a half; and the level of the arching of the diaphragm is between the sixth and seventh ribs.

2. If the colour of the lungs be generally pale, with numerous cinnabar-red spots, stripes, and edges; and are merely dark red on their posterior surface, on account of the subsidence of the blood from its own gravity.

3. If innumerable cells distended with air, and collected into insular groups, be plainly visible on the surface; if the substance of the lungs be every where expanded and spongy, crepitating audibly when cut, and yielding, on pressure under water, numerous air bubbles, or a reddish froth.

4. When the absolute weight of the lungs, in comparison with the length of the body, is manifestly and considerably increased. (Vide Table, p. 417.)

5. If the lungs, in connexion with the heart, and still more without it; if each lobe separately, and all the portions of it, when divided, project above the surface of the water, and float even after the strongest pressure, and are by far respectively lighter than water.

6. When the lungs quite fill the lateral parts of the cavity of the thorax, their anterior edges cover the sides of the pericardium, and their under concave surface the whole arch of the diaphragm. When their edges are every where rounded, and the ligulate elongations of the right middle and left upper lobes are shorter and obtuse.

7. When the length of the arterial canal is contracted to some lines, its thickness to that of a crowquill; whilst the thickness of the two pulmonary arteries is equal to that of a goosequill.

8. When the stomach occupies a completely transverse position, and is either freed from the albuminous fluid which in the fœtal state it contains, or presents traces of milk, or other extraneous matters. When the bowels are in some degree, or altogether, freed from meconium, and instead of it contain yellowish fæces; and when the urinary bladder is empty.

It appears to me necessary to add a few words with respect to *vaginal inspiration*.

If it be true that a child may inspire whilst in the vagina, or after the protrusion of the head, and yet die before the complete expulsion of the body is effected, a source of fallacy exists, which requires a mode of correction not adverted to in the preceding observations.* Professor Marc has argued that vaginal inspiration is impossible, from the incapability of expanding the chest, whilst the child is retained in the maternal passages. The testimony, however, of Schmidt, Osiander, Capuron, and others, leaves no doubt of the fact; and the unique case related, in the ad-

* We are certain, from our own experience and observation, that a child may inspire *after* the protrusion of the head, and yet die before the complete expulsion of the body.—EDITORS.

mirable work of Dr. Beck, by Dr. Hosack, has confirmed it, and established the possibility of death afterwards, before complete expulsion. In the relation of the case, Dr. Hosack recorded his belief that this child could not have been delivered without assistance; and thus sanctioned the general opinion of medical jurists, that vaginal respiration does not occur under circumstances which can create doubt, because it only takes place either where the delivery is so promptly effected as to be without difficulty or danger to the mother or child, or in presentations which render assistance indispensable; and this opinion is supported by all present experience. Presentations of the face or the feet are the cases in which vaginal respiration is most likely to occur.

In face presentations, my own experience enables me to say that a child may respire before birth; and although delivery in such presentations is exceedingly painful and difficult, and most frequently demands professional aid, we cannot say that unassisted delivery is impossible. (Vide Baudelocque, Heath's translation, vol. ii. p. 224.) In such cases the turgid state of the face, and other marks, so plainly indicate the nature of the presentation as to preclude mistake.

In footling cases, the other kind of presentation in which vaginal inspiration may occur before birth, and yet the child die before delivery, I apprehend little difficulty would be felt by any moderately judicious and experienced person in explaining the case. The absence of the usual tumor at the vertex would demonstrate the nature of the presentation; and, if any marks of injury existed on the child, their nature, situation, and direction would show whether they were the natural consequences of the assistance which a woman might have rendered herself. Foderé (*Traité de Médecine Légale*, iv. 500,) has detailed an instance of this nature; and his report on it is so judicious and full of instruction, as to furnish very valuable assistance in similar cases. Hence it appears that the possibility of vaginal inspiration does not invalidate the before-mentioned proofs of extra-uterine life, since the circumstances under which it may happen are known, and can be properly appreciated.

Coventry; Sept. 8th, 1829.

HOSPITAL REPORTS.

MIDDLESEX HOSPITAL.

Case of Lithotomy.

RICHARD MARSHALL, ætat. four years, was admitted into the Middlesex Hospital, under the care of Mr. MAYO, on the 12th of September. His parents stated that he had laboured under his present symptoms, which consist of frequent and painful micturition, for a year. On sounding him, a stone was felt. At the time of his admission, the bowels were much disordered; he had frequent stools, some wholly blood and mucus, and with each the rectum was inverted for several inches.—R. Confect. Aromat. gr. viij. cum Pulv. Cretæ cum Opio gr. v. ex Aquâ Cinnamomi, sextis horis.

In two days the action of the bowels became regular, and the patient subsequently took, as his only medicine, equal parts of milk and lime-water twice a day.

The lateral operation was performed by Mr. Mayo on the 17th, and two smooth, flat, oval stones were extracted; the largest about an inch and a half in its long diameter. After the operation, (as in another case, in which we saw Mr. Mayo operate a few months since,) no dressing was applied to the wound, beside a piece of lint dipped in oil.

An hour after the operation, no water having passed through the wound, Mr. Mayo drew the lips of the wound apart, and passed his finger to the bladder. In the evening, however, the child made water freely through the natural passage, no water passing out at the wound. The child took at night two grains of James's powder, but was restless.

Early the next morning, no water having yet flowed through the wound, the wound was again opened with the finger. The child then strove to make water, when a little passed through the urethra, the greater part with a gush through the wound.

The water continued to flow through the wound the two following days.

On the 21st, the water passed again by the natural passage alone. The wound now healed rapidly, and the child was discharged well on the 13th of October.

Mr. Mayo observes, that, where death occurs after lithotomy, the most frequent cause is effusion of urine about the neck of the bladder; and that urine may lodge in the pelvis, either through the internal incisions and general separation of parts being too free, or in consequence of the wound uniting superficially by adhesion. The latter risk may be avoided, either by opening the wound with the finger, if the urine does not pass through it soon after the operation; or by introducing a slip of lint dipped in oil into the

wound, as soon as the operation is over; or by leaving a piece of gum catheter, passed through the wound, with its extremity in the bladder. Mr. Mayo prefers the plan of gently opening the wound once, or oftener if necessary, during the twenty-four hours following the operation; upon the supposition that the wound heals more readily when this method is adopted, than when either of the others is followed.

Menstruation during Pregnancy.

SARAH COOPER, ætat. thirty, is a patient in the Middlesex Hospital, with varicose veins of the leg, which have been partially obliterated by the use of the caustic paste. Mr. MAYO pointed out the following circumstances in her history, as worthy of being put on record:

She was married at the age of seventeen, shortly after the catamenia had commenced. She has borne nine children, and had two miscarriages. When not pregnant, the catamenia recur regularly at the usual period, preceded, for twenty-four hours, by pain at the epigastrium and in the back, and a sense of shooting in the breasts. The entire indisposition lasts a week. When she is suckling, the catamenia occur exactly in the same manner as when she is neither suckling nor pregnant. During the whole term of her pregnancy, the catamenia recur more frequently, more profusely, and less regularly; about every third week. She has become pregnant five times while suckling.

WESTMINSTER HOSPITAL.

Case of Diseased Testicle.

IN our last Number, page 303, we recorded a case of sarcocele, in which the use of bougies (which was recommended by Mr. GUTHRIE,) completely cured the disease, after various other means had been ineffectually tried by several eminent surgeons. In the following case, it is true, external irritation was produced by the tincture of iodine; but it is but fair to infer, with the previous case in our remembrance, that the use of the bougie was at least a very important auxiliary.

William Cox, aged fifty-three, has had an enlarged testicle since February last; applied at the Westminster Hospital on the 20th June, and was admitted under Mr. Guthrie. The right testicle is considerably enlarged, and some fluid can be distinctly perceived on the anterior part, covering an irregular hard testis. He complains of pain in the part, extending to the back. The cord appears to be sound.

Mr. Guthrie evacuated the fluid by means of a lancet and an eye probe, when the testicle became more distinct, very hard, knotted, irregular, and heavy, resembling very much a scirrhus testis, excepting that the pain was more constant, and less of a

lancinating kind. The appearance of the man, and his state of health, were otherwise good.

Mr. Guthrie said that this was one of the many testicles that would have been immediately removed twenty years ago, but which was certainly curable. He directed him to take the submuriate of mercury, with the Ext. Conii, night and morning, until his mouth became sore; to have the testicle properly supported, and the hemlock poultice applied. Under this treatment he continued during the month of July: the testicle diminished in size, the hardness subsided, and the irregularities in a great measure disappeared.

The effects of the mercury on the mouth having gone off in August. Mr. Guthrie directed a bougie to be passed every second day, and the tincture of iodine to be applied to the scrotum in the following manner: The scrotum being shaved, a piece of lint, of a definite size, is to be dipped in the tincture, and applied to it, and to be changed for another piece, or to be moistened with the tincture when it becomes dry; and continued until it causes considerable irritation, which takes place in from twenty-four to forty-eight or sixty hours; at the end of which time the part to which the application has been made becomes hard, dry, and painful. A poultice is to be had recourse to for twenty-four hours, when the scale of cuticle comes off, leaving an irritable surface, very much like that of a blister. In fact, it is a different and elegant way of giving rise to a similar but more efficient irritation, and one to which the patient submits more readily than to a common blister.

Under this treatment, repeated from time to time, the patient has recovered: the pain is gone, the testicle is nearly of its natural size, and there remains only a small quantity of fluid to be absorbed.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

Cases reported by Mr. FOOTE.

Chronic Catarrhal Inflammation, with Specks on the Cornea.

ELLEN MORVYN, æt. eight. December 27th, 1828. Her present affection is attributed to a cold she contracted in the beginning of the winter.—Applic. Ung. Arg. Nitr. Pulv. Alter. i. omni nocte et mane sumend.

30th.—Better. Rep. medic. et applic. unguent.

January 1st.—Is a great deal better. Rep. ung.; pulv. rep.

6th.—Discharged cured.

Pustular Inflammation.

Charles Wheeler, æt. ten. January 15th, 1829. His eyes have been inflamed five weeks. Does not complain of any pain; much lachrymation; the eyes are closed in the morning; conjunctive of lids and ball inflamed; a pustule on the cornea of the right

eye, tending to ulceration.—Applic. Ung. Argent. Nitr. Pulv. Jalap. C. ʒi. mane sumend.

17th.—The left eye is nearly well; the right rather better.—

Ung. repet. et Pulv.

20th.—The right eye is much the same.—Unguent. ad dextr.; Pulv. repet.

22d.—The right eye is much better: the pustule no longer threatens ulceration. The left eye is cured.—Ung. Argent. Nitr. ad dextr. tantum.

27th.—A small speck is left on the corner of the right eye.—Ung. repet. et Pulv.

29th and 31st.—Ung. repet.

February 3d.—The speck still remains. Discharged, with directions to use the Gutt. Arg. Nitr. gr. vj. ad ʒi.

Inflammation of Conjunctiva, with Pustule of Cornea.

Ellen Guindley, æt. two. March 7th, 1829. Disease apparently caused by the irritation of teething. Has been affected in this way for six months. Intolerance of light, with increased lachrymation, exist in a great degree.—Appl. Ung. Nigr. Pulv. Jalap. C. ʒi. mane sumend.

10th.—Child much better. Repet. Ung.

12th.—Cured. Discharged.

Inflammation of the Conjunctiva and Sclerotic Coats, with Ulcer on the Cornea.

Joseph Delafons, æt. eleven. May 19, 1829.

The Ung. Nigr. was applied on the 19th for a simple inflammation of the conjunctiva; he then stayed away for a week. When he returned, there was acute inflammation of the conjunctiva and sclerotic coats, with a large ulcer on the cornea, which was highly vascular. Cornea appeared rather dull, a zone of vessels surrounding it. Complained of great pain and mistiness of vision.—Appl. Ung. Argent. Nitr.

28th.—Much better. Repet. Ung.

June 4th.—Repet. Ung.

9th.—Ulcer cicatrising. Repet. Ung.

18th.—Discharged, cured.

Wound of the Cornea; Protrusion of the Iris.

William Barkham, ætat. twenty. December 27th, 1828. The instrument he was using, while working at his trade, slipped, and struck him in the left eye. The wound is rather large, at the inferior and inner parts of the cornea; the iris protruding.

28th.—Has not any pain. Hydr. Subm. gr. vj. h. s. s.; Magn. Sulph. ʒi. mane sumend.

29th.—Complains now of great pain. Venesection ad ʒxiv. Pil. rep. et Magn. Sulph.

30th.—Free from pain.—A bandage to be applied with pads on the eye, keeping it closed.

This bandage was continued until the 13th of January, occasionally taking aperient medicines, when he complained of severe pain in the eye.—Cucurb. cruent. ad ℥xij. temp. sinistr. Hydr. Subm. gr. vj. h. s. s. Magn. Sulph. ℥i. mane sumend.

17th.—The cupping has succeeded in removing the pain. The bandage to be reapplied.

February 3d.—Discharged, cured; returned thanks. The iris has formed adhesions with the cornea; the pupil is irregular, being nearly oval: he says, however, that his sight is as good as ever.

Case of Iritis of both Eyes, successfully treated with the Oleum Terebinthinæ. Reported by Mr. WEIGHT.

MARY ANN BERRY, ætat. twenty-four; admitted August 11th, 1829, with iritis of both eyes.

The inflammation commenced a fortnight ago, accompanied by aching pains in the ball of the eye. Since the first four or five days she has not observed any increase of the redness, which was a little diminished by the application of some leeches three days ago. The aching pains, though not always present, frequently occur, especially on any exposure to light: they are, however, not very violent, and do not last long. At present there is not much inflammation of the sclerotic in either eye, but it is greater in the left, forming a zone, of a reddish pink colour, round the cornea. In this eye the anterior chamber is cloudy, and the pupil of an oval shape. In the right eye, the anterior chamber has its natural transparency, but the pupil is more irregular than the left. The inflammation of the conjunctiva in both eyes is very trifling, and there is little or no increased lachrymation; her sight, she says, is as good as ever. Three days before her eyes became inflamed, an eruption broke out all over her body; little of which is now visible, but what there is looks syphilitic. She admits having had a sore throat a short time ago, but denies ever having had, to her knowledge, any of the primary symptoms of syphilis.—Ol. Terebinth. ℥i. ter quotidie.

12th.—She has had great pain in making water, and her eyes are rather more inflamed, but not painful; the bowels rather confined.—Omitte Ol. Terebinth. Capiat Pulv. Jalap. comp. ℥i. statim. Inf. Lini pro potu ordinario.

13th.—The left eye rather more inflamed, the right a little improved; the strangury continues, but is not very severe; the bowels are open.—Cont. Ol. Terebinth. ℥i. ter die.

14th.—Complains of a drawing pain in the left eye, as if a blister was applied to it, but it is not so severe now as it was during the night. The sclerotica and conjunctiva are much more inflamed, and the anterior chamber more cloudy: the pupil, however, can be distinctly seen, and is rather more circular. The pupil of the right eye is still very irregular, but the sclerotic inflammation has

almost disappeared. She does not experience much pain in the urinary organs from the medicine. The bowels rather confined, and she feels very sick.—Omitt. Ol. Terebinth. Capiat Pulv. Jalap. comp. $\mathfrak{z}\mathfrak{i}$. statim.

15th.—Better. Pupil of the right eye is more regular, and sclerotic inflammation less. Pain in the left eye not so great; the pupil is more circular, and the anterior chamber is much clearer, and she can see better; the sclerotic inflammation diminished. She complains now of very little pain in making water; bowels open.—Rep. Ol. Terebinth. $\mathfrak{z}\mathfrak{i}$. ter die.

10th.—She suffered great pain in both eyes last night, but the inflammation is diminished; the right eye is nearly well. She only took one dose of Ol. Terebinth. yesterday. There is no strangury, but she feels very sick.—Cont. Ol. Terebinth. Emp. Belladonn. tempor.

17th.—The pain a little relieved, but still severe, with great intolerance of light; the anterior chamber of the left eye much clearer, the conjunctiva rather more inflamed; the pupil of the right eye is slightly irregular, and the vessels round the edge of the cornea still remain injected.—Applicentur Hirudines sex temp. sinistro. Cont. Ol. Terebinth.

20th.—She can see much better, but the anterior chamber is still dim; the pupil regular. She took only one dose of medicine yesterday.—Cont. Ol. Terebinth. ter die.

24th.—Has not taken any medicine since the 20th. The inflammation, however, is considerably diminished; the iris is less discoloured; the pain continues, but not so severe.—Cont. Ol. Terebinth. ter die.

25th.—The eye rather more painful; the pupil a little irregular. The medicine produces giddiness, and slight pain in making water.—Magnes. Sulphat. $\mathfrak{z}\mathfrak{i}$. mane sumend. Cont. Ol. Terebinth.

29th.—She has taken her medicine regularly since the 25th. She cannot see so well to-day, and she complains of having frequent flashes of light before her eyes in the course of the day. There is a slight redness of the sclerotic of the right eye.—Cucurbit. cum ferro ad $\mathfrak{z}\mathfrak{x}$. Capiat. Ol. Terebinth. $\mathfrak{z}\mathfrak{i}\mathfrak{s}\mathfrak{s}$. ter die.

September 1st.—The sclerotic inflammation of the left eye nearly gone; the pupil remains irregular; the right eye rather more inflamed. The medicine produces giddiness, but no scalding.—Pulv. Jalapæ C. $\mathfrak{z}\mathfrak{i}$. mane. Cont. Ol. Terebinth.

5th.—The left eye is now quite well; the right is still a little inflamed, the conjunctivæ of the lids rather more vascular than usual. She complains to-day of a little scalding.—Cont. Oleum Terebinthinæ.

8th.—The pupil of the left eye remains rather irregular, and the vessels of the sclerotic slightly injected; the pupil of the right eye dilated and irregular.—Rep. Ol. Terebinth. $\mathfrak{z}\mathfrak{i}$. bis in die.

15th.—The pupils of both eyes still remain slightly irregular, and there is some inflammation of the conjunctiva of the lids, for

which she was ordered the application of the nitrate of silver ointment.

17th.—The inflammation of the lids much diminished. The pupils are now regular, and redness of sclerotic quite gone.—Rep. Ung. Argent. Nitrat.

NAVAL HOSPITAL OF ST. PETERSBURG.

Case of a Tumor of the Radial or Spiral Nerve of the right Arm, removed by HARRY LEEKE GIBBS, M.D. Member of the Royal College of Surgeons of London.

PHILIP CHILAIIEFF, æt. forty-two, a sailor of robust make and plethoric habit, was admitted into the General Naval Hospital of St. Petersburg, on the 24th December, 1828. He stated that, about fifteen years ago, he received a blow with a handspike on the outside of the right arm; that the pain at the time was severe, and followed by numbness down the forearm to the back of the hand and fingers; and that these morbid sensations did not completely subside till some months had elapsed. Half a year from the infliction of the injury, he first perceived a moveable subcutaneous swelling, of the size of a kidneybean, about four inches above the elbow-joint, just below the insertion of the deltoid muscle, painful to the touch, and accompanied by lancinating pain in the course of the branches of the radial nerve, on being pressed. These symptoms were increased by violent exercise or changes of the weather. For twelve years and a half the tumor remained stationary and without pain, when two years back (from long-continued hard labour, as he supposes,) it gradually increased, and at the same time the lancinating pains down the forearm recurred.

At his admission into the Naval Hospital, I discovered a prominent tumor, of the size of a small hen's egg, tolerably moveable, but connected by a cord both above and below, highly painful on being handled, very slightly compressible, and attended by an increase of the symptoms before mentioned. As the patient appeared anxious and excited, I ordered him to lose eighteen ounces of blood, and a smart cathartic to be given. He was put on a very spare diet, and the bowels kept in a lax state.

January 5, 1829, the arm being laid on a table, I made an incision of five inches, extending from the lower part of the deltoid to within an inch of the outer condyle of the os brachii. On dissecting back the integuments, a tumor of a bluish white colour was brought into view. I found it occupying the fossa, formed by the insertion of the deltoid muscle above, the triceps extensor cubiti behind, the origin of the supinator radii longus below, and the brachialis externus within. Under the outer portion of the latter muscle part of the tumor had imbedded and attached itself, so that it became necessary to remove it. Having separated the tumor from its lateral attachments, I divided the nerve three quarters of an inch below it. The man instantly exclaimed that he had lost the power of raising his fingers, as well as the feeling in the

outer part of the forearm and back of the hand. The dissection beneath was now easy, and I was happy to find that my fears of an adhesion to the periosteum were groundless. I lastly cut through the nerve at the like distance above the tumor, just as it emerges from beneath the bone. This was attended with pain, and as the artery accompanying the nerve bled freely, a ligature was applied. The vessel seemed dilated, and to be the *arteria nutriens* of the tumor. The wound was brought together by strips of adhesive plaster, over which graduated compresses and a circular bandage were applied. The limb was placed on a pillow in a relaxed position, the forearm and hand enveloped in flannel, and a bottle of warm water ordered to be constantly applied to the fingers.

January 4, second day.—He passed but a restless night, notwithstanding the administration of two grains of opium yesterday evening. He complains of oppression under the sternum, and a sense of constriction across the lower part of the chest and præcordia; also of pains shooting up the right side of the neck, in the course of the cervical nerves forming the brachial plexus. As the patient appeared agitated and the pulse rising, two pounds of blood were directed to be drawn from a large orifice, and an active purge was prescribed. By the evening copious evacuations had taken place, and he was composed.

Third day.—He slept tolerably; the pain was more concentrated to the left side of the thorax and right hypochondrium. A large blister was applied over these parts.

Fourth day.—Much better. The strictest antiphlogistic plan was followed, and the bowels kept well open by a saline mixture with the sulphate of magnesia.

Fifth day.—About half the wound was found healed by the first intention. He now complains chiefly of an acute pain at the extremity of the right thumb-nail, especially on its being touched. He has no feeling on the radial and outer side of the forearm, back of the thumb, and those fingers supplied by the dorsal branch of the radial nerve. It is curious that a well-defined limit exists, extending as far as the middle of the ring finger; for the inside of this and the whole of the little finger, supplied by the ulnar nerve, are sensible on being pinched.

Sixth day.—The wound is suppurating freely at the lower part.

Ninth day.—The ligature came away. The patient sat up for a few hours. The wound is filling up by granulations at the lower part.

Twelfth day.—From this period nothing occurred to interrupt the cure of the wound, save an infiltration of matter under the integuments, towards the lower and outer side of the arm. This sinus being laid open, a free and depending opening was afforded.

On the twenty-ninth day the patient was walking about, his arm supported in a sling, and his wound healed.

Thirty-fifth day.—He has regained a slight use of the extensor muscles of the fingers. The numbness and want of feeling are

gradually disappearing. Electricity in the course of the brachial nerves and stimulating frictions are now daily employed, and motion given to all parts of the limb.

On the 16th of April the patient was dismissed the hospital, with returning sensation in the back of the hand, and a tolerably free use of the arm.

How far the other nerves supplying the forearm and hand may contribute, by anastomosis as it were, in restoring the perfect use of those parts divested of the influence of the radial nerve, time must prove. Hitherto something of the sort seems to have commenced; and my expectations are the more sanguine, as to this date, June 2d, 1829, the man has not returned to the Naval Hospital.

The tumor, on examination, was found to consist externally of the thickened neurilema, extending from the nerve above the tumor as a capsule to the nerve below. This general tunic was of a lamellated structure, as viewed by the microscope, dense and inelastic, and of the colour of the tunica albuginea of the testis. Under this the nervous fasciculi appeared diverging and intersecting each other like network, to the thickness of half an inch. The rest of the mass consisted internally of a pulpy, striated, greenish-black matter; the striæ running from the circumference towards the centre, and surrounding minute interstitial cells filled with a similar medullary pulp or jelly. A small portion of coagulated blood was very distinct on one side in the firmer substance of the tumor. The centre was occupied by half a teaspoonful of highly fetid coffee-coloured sanies. Condensed cellular membrane surrounded the whole of the tumor, which, at the inner and lower side, was firmly adherent to that part of the brachialis externus removed with it during the operation. The tumor was an oval of two inches and a half in the long diameter, by nearly two inches across. This, with the portions of nerve divided above and below, brought the whole length of the extirpated part to four inches.

Observations. That the blow received on the arm fifteen years ago was the primary cause of the chronic inflammation established in the radial nerve, most probably first in its neurilematic theca or capsule, there is little doubt; but that it should have once commenced, and then have lain dormant for the space of nearly thirteen years, is remarkable. This reproductive power I have had occasion to observe not unfrequently, both in the mammæ and testes, arising either from a blow, the action of cold, or some peculiarity of the system at the time. The epididymis I have found to be most speedily affected by this sudden change, particularly in dramdrinkers, and in those addicted to excess in venery. In these cases it appears to me that the sooner an operation is had recourse to, the better. The preparation of this rare and interesting tumor I have presented to the Hunterian Museum belonging to the Royal College of Surgeons of London.—*Edinburgh Med. and Surg. Journal.*

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
illa, prius, cretâ; mox hæc, carbone, notamus.—PERSIUS.

Pathological and Practical Researches on Diseases of the Brain and Spinal Cord. By JOHN ABERCROMBIE, M.D. Fellow of the Royal College of Physicians of Edinburgh, &c. and first Physician to his Majesty in Scotland. *Second Edition, enlarged.*—8vo. pp. 476. Waugh and Innes, Edinburgh, 1829.

As we have always expressed a very favorable opinion of Dr. ABERCROMBIE's pathological researches, we are, of course, gratified to find that a second edition of the present work is so soon required. Unlike many writers on pathology, Dr. Abercrombie has no exclusive doctrines to support which can interfere with the unbiassed history of disease, as he has witnessed it at the bedside of the patient. "He may indulge in conjectures, but these he keeps entirely distinct from the facts upon which they are founded;" and, by having strictly adhered to this principle, he has given to the profession a more interesting and practically useful body of evidence on diseases of the brain, stomach, and other abdominal viscera, than has been furnished by any other modern writer.

We have before noticed the first edition of the present work, and shall now confine ourselves to an analysis of the additional matter contained in the second. With the general divisions and arrangement of the work we must presume our readers to be acquainted.

Since the publication of the first edition, Dr. Abercrombie has seen several examples of a dangerous modification of Meningitis, which does not usually admit of very active treatment. General bleeding is not borne well; and the treatment must commonly be confined to topical bleeding, with purgatives, antimonials, and the powerful application of cold to the head. In such cases the cause of death is obscure. "It seems in general to be a sudden sinking of the vital powers supervening upon the high excitement, without any of the actual results of inflammation." In these instances Dr. A. has lately been induced to adopt a different mode of treatment from that which he originally recommended; and, as an example of the occasional efficacy of it, (for he does not at present venture upon any general conclusions,) the following case is related.

"A lady, aged about thirty-eight, was recovering from her eleventh accouchement, when, at the end of a fortnight, she be-

came affected with a deep-seated hard swelling in the right side of the pelvis, which was tender to the touch, and was accompanied by a considerable degree of fever. After repeated topical bleeding and other remedies, the febrile state subsided, the swelling lost its tenderness, and seemed to be gradually diminishing in size; but its progress was very slow, and, after three or four weeks, she was still confined to bed, and suffering a great deal of uneasiness: her pulse was now calm, but she was considerably reduced in strength. At this time she became, one day, alarmed and agitated by some family occurrence, and immediately began to talk wildly and incoherently; and, after a restless night, was found, next day, in a state of the highest excitement, talking incessantly, screaming, and struggling, with a wild expression of countenance, and a small rapid pulse. She was treated by topical bleeding, laxatives, cold applications to the head, &c., but with little or no benefit; and, on visiting her on the following day, I found her sitting up in bed, with a look of extreme wildness, both her hands in constant motion, talking incessantly and wildly; and I learnt that she had not ceased talking for one instant for the last twelve hours. Her pulse was now rapid and feeble, and her countenance expressive of exhaustion. In consultation with a highly intelligent friend who had charge of the case, I mentioned my experience of the fatal nature of the affection, and proposed to make trial of treatment by stimulants. A glass of wine was accordingly given, with evident abatement of the symptoms; and it was ordered to be repeated every hour. At the end of the fourth hour, she was perfectly composed and rational, her pulse about ninety, and of good strength; and from this time there was no return of the symptoms. The tumor in the right side increased in size, suppurated, was opened, and healed favorably. From this time she continued in perfect health, and has since passed through another accouchement in the most favorable manner.

“This case I have given as another example of this interesting affection. I have employed the same mode of treatment, with similar benefit, in several other cases, both of males and females. The chief difficulty is in deciding upon the particular cases to which the stimulating treatment is applicable. They appear to be those in which the excitement is accompanied by a small and rapid pulse, and an expression of paleness and exhaustion. When these characters are present, however violent the excitement may be, I have not been deterred from the practice, and, in a considerable number of instances, have found much reason to be satisfied with it. I have tried it, but without the same benefit, in some of the common cases of insanity, accompanied by paleness and bodily weakness, but with a natural pulse. When there is frequent and strong pulse, with flushing and other marks of increased vascular action, it would of course be injurious.” (P. 67.)

It is difficult, nay perhaps impossible, even with the utmost fidelity of description, to convey to the minds of others

a precise knowledge of the nature of any particular case: but, unless we are mistaken, we have seen cases similar to the above, in which, when bleeding, purgatives, and cold have been employed, from a conviction that the disease was purely inflammatory, and the patient has still remained restless and loquacious, with a small pulse, pale countenance, and appearances of exhaustion, almost immediate relief has been derived from the use of opiates. Of course, much practical tact and experience will be required to enable the practitioner to determine when either stimuli or opiates may be advantageously, or even safely, prescribed in such instances.

The following cases of softening of the brain are particularly interesting.

"A gentleman, aged twenty-six, of a plethoric habit, had suffered occasionally for two or three years from headach and vertigo, which were always relieved by depletion. On 12th April, 1827, while walking out, he was seized with confusion and giddiness, embarrassed speech, and a considerable degree of paralysis of the right leg. He was rather pale; his pulse was seventy, and soft; and he did not complain of any headach. The usual treatment was adopted with activity by Dr. Combe, of Leith, without much relief. On the contrary, after several days he began to complain of acute headach, accompanied by vomiting and hiccup; and the other symptoms continued nearly as before, his speech being laboured and slow, and his memory very defective. After some weeks those symptoms subsided, so that he was able to walk out; but the headach continued, with frequent vomiting. The pain was chiefly referred to the left side of the head, sometimes to the occiput, and there was occasional numbness of the right arm. When I saw him, along with Dr. Combe and Dr. Kelly, in July, his chief complaint was of frequent and irregular attacks of vomiting, occurring daily, or repeatedly during the day. It came on very suddenly, without previous nausea, and he was often awakened in the night by the sudden attack of vomiting. He had now a pale sickly look; there was no paralytic affection, and little complaint of headach, though he still had occasional uneasiness in the head, sometimes referred to one part of it, and sometimes to another. When he did refer it to a particular part as the principal seat of the pain, it was either the left temple or the occiput. But the headach at this time was slight and transient, and the symptoms in the stomach were so much the more prominent that it was a matter of much doubt whether there was now any fixed disease of the head. The vomiting was much relieved by the oxyd of bismuth, so that he was free from it for several days. But it soon returned and went on as before, with increasing debility, great listlessness, and bad appetite; pulse little affected. He had now a peculiar unsteadiness of his limbs, so that, on first getting up into a standing posture, he staggered very much, and required

some time and attention to steady himself. When he accomplished this, he walked with tolerable firmness. The symptoms went on in this manner till the 27th of October, when he was suddenly seized with violent and continued convulsion, and died in nine hours.

“*Inspection.* In the substance of the middle lobe of the left hemisphere of the brain, about the level of the lateral ventricle, there was a portion in a state of complete ramollissement, about an inch and a half in length, and an inch in its other dimensions, and the neighbouring parts appeared unusually vascular. The tuber annulare and pons Varolii were softer than usual, but otherwise healthy. No other morbid appearance could be discovered in the head, and all the other viscera were healthy.” (P. 89.)

Dr. A. presumes, that in this case the sudden attack, so closely resembling the ordinary paralytic attack, must have been connected with the commencement of the inflammatory stage. The remarkable symptoms in the stomach, in the further progress of the disease, and the mode of its termination, render it altogether a case of much pathological value.

The following case shows the same morbid appearance, with a train of symptoms considerably different, but with a remarkable similarity in the mode of its termination.

“A gentleman, aged thirty-eight, during two years before his death, had suffered several epileptic attacks; from which, however, he had always speedily recovered. On the morning of 27th December, 1827, he was found in bed speechless and paralytic on the right side. He recovered his speech in the course of the day: the palsy continued in the usual manner, and after some time he began to recover a degree of motion of the parts. When he came to Edinburgh, about a month after the attack, he had recovered the use of his leg so far as to be able to walk once or twice across his room with much exertion; his arm was improved in a much less degree; his speech was distinct, but his mouth was considerably distorted, and his mind was somewhat impaired. He now consulted Dr. Thomson, and under the usual treatment he was progressively improving, so that at the end of another month he could walk along the streets to a considerable distance, though with a dragging motion of his leg, and could nearly raise his arm to his head. In the evening of 22d February he went to a supper party, and seemed remarkably well; but departed considerably from the abstemious regimen to which he had been previously restricted. About eight o'clock on the morning of the 23d, he was found in bed in a state of complete insensibility, accompanied by severe and general convulsion, which was strongest in the limbs of the right side. The face was much convulsed, the eyes rolling and insensible, the respiration laborious and convulsive. Bloodletting and the other usual means were actively employed, without any

relief. The convulsion continued unabated in the state now described, when I saw him at eleven, and he died at two.

“Inspection.” The brain externally was healthy, except some old adhesion of the membranes near the posterior part of the falx, and very trifling effusion under the arachnoid. The ventricles contained the usual very small quantity of fluid. On the outer side of the left ventricle, and separated from it by a thin partition of healthy cerebral substance, there was a defined portion in a state of complete and diffuent ramollissement. The portion thus affected was about an inch in depth; about half or three-fourths of an inch in diameter at the upper part; and became gradually narrower as it descended by the side of the ventricle, until it terminated almost in a point. There was considerable softening of part of the medulla oblongata, and the upper part of the spinal cord. No other vestige of disease could be discovered, on the most careful examination.” (P. 91.)

Dr. A. does not attempt to offer any explanation of the symptoms in these two most remarkable cases, or to reconcile them with the old notions in regard to diseases of the brain. He gives them as facts, carefully ascertained and faithfully related, to be illustrated by further observations.

For the following case the author is indebted to Dr. COMBE, of Leith. It affords a good example of tubercular disease of the brain, and is interesting from the singular coincidence of the two forms of paralysis, on the opposite sides of the face: the one connected with the division of the portio dura, the other with the disease in the brain.

“A man, aged thirty-six, about a year before his death, had a tumor extirpated from behind the angle of the jaw, on the left side, and, immediately after the operation, paralysis took place on the left side of the face; in consequence of which his mouth was distorted to the opposite side in a most extraordinary degree. About six months after this he began to complain of headach and giddiness, which often gave him the appearance of intoxication; and after some time these symptoms were followed by impaired vision, occasional strabismus, and a considerable degree of deafness; and at last by drowsiness, coma, convulsions, and death. As these symptoms advanced, he became affected with numbness, and loss of power of the right side of the face, which increased very gradually. During the increase of this, the distortion of his mouth gradually diminished, and, for some time before his death, his countenance had become entirely symmetrical. Both sides of his face were now entirely paralytic; but with this difference, that on the right side the feeling was also lost, while on the left the feeling was entire.

“Inspection.” In the centre of the middle lobe of the right hemisphere of the brain, there was a tubercle about an inch long, and three fourths of an inch in breadth. At its lower part it was

attached to the cerebral substance, but the rest of it was detached, being surrounded with dark-coloured pus. In the vicinity there was increased vascularity, with softening of the cerebral substance." (P. 178.)

It is now a well-known fact that apoplexy, as well as insanity and various other diseases, the symptoms of which can only be referred to some cerebral disturbance, may prove fatal, and yet no morbid appearance whatever be detected in the brain, after the most careful examination. Dr. Abercrombie applies the term "simple apoplexy" to that variety of the disease in which the brain is apparently healthy. The phenomena of this disease appear fully to establish the important fact that there is a modification of apoplexy depending upon a cause of a temporary nature, without any real injury done to the substance of the brain; that the condition upon which this attack depends may be removed almost as speedily as it was induced; and that it may be fatal without leaving any morbid appearance in the brain. The following case occurred under the care of Dr. DUNCAN. A similar instance very recently occurred in our own practice.

"A man, aged fifty-four, of a plethoric habit and short necked, was admitted into the clinical ward on 30th May. He was in a state of nearly perfect coma, speechless, and with palsy of the right side to such an extent that even the intercostal muscles of that side did not act. The leg and arm of the left side were occasionally affected with convulsive motions. Breathing stertorous, deglutition much impaired; pulse seventy-four. The affection was of three days' standing, and had come on with vertigo, loss of vision, violent headache and vomiting.

"All the usual remedies were employed in the most judicious and active manner, without benefit. On the 1st of June there seemed to be a slight return of intelligence; but he soon relapsed into coma, and died on the 3d, without any change in the other symptoms.

"*Inspection.* A most minute and careful examination was made of the brain, without discovering any appearance of disease, except that the choroid plexus seemed rather darker than usual, and the basilar artery was diseased at one spot. By the side of the artery there was a spot of the cerebral substance, no larger than a barleycorn, which appeared somewhat softened; but even this Dr. Duncan considered as extremely doubtful." (P. 218.)

Upon this part of the subject, however, it behoves us not to be too presumptuous. With all our anatomical dexterity, disease may exist, although no vestige of it can be traced by the most skilful anatomist. Dr. BURROWS, in discussing the physical causes of insanity, has very properly observed, that "we ought not to presume, because there

are no visible marks of a morbid condition of the brain or its appendages, that therefore the whole are in a perfectly healthy state. Where is the anatomist who will dare maintain that a brain is free from disease or structural change, because, after the most minute inspection, he cannot discover any?"* It must be remembered that even in the elementary composition of the brain anatomists are not agreed.

The following case, for which Dr. A. is indebted to Dr. MACAULEY, is remarkable for the unusual rapidity of its fatal termination.

"A woman, aged forty-five, who had been for several years liable to headach, attended a crowded meeting on the evening of 25th June, 1829, and seemed in perfect health. Towards the conclusion of the meeting she uttered a loud and convulsive scream, and instantly fell down in a state of insensibility. She was immediately carried out, and was seen by Dr. Macauley, who happened to be present: he found her pale and totally insensible, and the pulse feeble; and within five minutes from the first seizure she was dead.

"*Inspection.* The integuments of the head were much loaded with blood. On removing the dura mater, there was a thin but very extensive appearance of extravasated blood, or rather ecchymosis, which covered nearly the whole surface of the brain. In the substance of the anterior lobe of the right hemisphere there was a coagulum of blood, the size of a large bean. All the other viscera were examined in the most accurate manner, but nothing was discovered, except a tubercle on the liver, and a small spot of ossification on the abdominal aorta." (P. 245.)

In the following instance a more extensive extravasation of blood, in all the ventricles, and along the whole course of the spinal cord, was detected, than had ever before been observed by Dr. Abercrombie. The case is remarkable from the period of life at which the affection took place, and from its similarity in the symptoms to one of the common inflammatory affections terminating by effusion.

"A boy, aged nine, previously in perfect health, awoke in the night of 18th May, 1829, complaining of headach; had vomiting and slight convulsion. On the 19th he was seen by Mr. W. Brown, who found him still complaining of headach, with occasional vomiting, but without any urgent symptom. Under the usual treatment the complaint seemed gradually to subside, and on the 25th he appeared to be entirely recovered; but in the afternoon of that day he had a return of convulsion, and in the evening complained much of headach; pulse sixty-four.

26th and 27th, said he was better, but seemed drowsy. Pulse slow; bowels obstinate.

* Commentaries on Insanity, p. 70.

"28th, had two attacks of convulsion, the second of which was very severe and continued for several hours, affecting chiefly the left side of the body; pulse 130.

"On the 29th, he was again better; but from this time he became gradually more and more drowsy, and at last comatose, with squinting and occasional convulsive motions of the limbs, and he died on the 3d of June. His death was preceded by severe convulsion, of several hours' duration. I saw him, along with Mr. Brown, from the 29th.

"*Inspection.* The surface of the brain was healthy. The lateral ventricles were distended with dark bloody fluid, and each of them contained a mass of coagulated blood: that in the right was the size of a large walnut, the other smaller. The third and fourth ventricles were quite filled with coagulated blood in a very firm state; and, from the bottom of the fourth ventricle, the coagulum was traced outwards, and spread along the base of the brain and cerebellum, and around the medulla oblongata. The spinal canal being now laid open, the dura mater of the cord appeared remarkably distended, and the cord was found, through its whole extent, entirely enveloped by a very firm and uniform stratum of coagulated blood. The brain and cord were in their substance healthy, and the source of the hemorrhage could not be discovered." (P. 250.)

As a striking illustration of the nature of the symptoms which may exist with most extensive and remarkable organic disease of the brain, a case is added to the present edition, which fell under the observation of Dr. KELLIE.

"A medical gentleman, aged fifty-six, of a cultivated mind and temperate habits, had been for some time liable to various ailments, which his medical friends considered as in a great measure hypochondriacal. The most defined complaints were occasional uneasiness in the site of the frontal sinus, and a very peculiar feeling of numbness in the point of the thumb. But his general health appeared good, and he was able to enter into all the usual enjoyments of life, having retired from practice, till he was one day seized, while walking, with sudden sickness and faintness. These were followed by some headach, and an obvious difficulty of articulation, or rather a difficulty in finding the expression which he wished to make use of. He was now treated by bleeding and the other usual means; but this peculiar loss of the recollection of words continued and gradually increased, so that he had greater and greater difficulty in recollecting the words which he meant to employ, but he had no difficulty in pronouncing them. His understanding at this time was quite entire; his pulse varying from 80 to 112. He was nearly confined to the house, but out of bed during the day; and all the usual remedies were employed in the most assiduous manner. After he had gone on in this way for several weeks, he began to have slight distortion of the mouth,

and complained of numbness of the right arm, and soon after of weakness of the right leg. These symptoms gradually increased to perfect hemiplegia; and about this time also he entirely lost his speech. He was now confined to bed, but without coma. He had the perfect use of his sight and hearing, and, as far as could be judged, his understanding was entire. He died with symptoms of bronchitis in the ninth week from the first attack.

"*Inspection.* The left hemisphere of the brain was found to be diseased throughout in a very singular manner. Some parts of the mass were indurated, others softened; and it presented a variety of colours, chiefly a rose colour, grey, and yellow; and the more diseased portions were highly vascular. In some places there were distinct insulated masses, enclosed in vascular cysts; these were generally indurated, but some were softened, and they were of a rose or flesh colour, passing into grey. The change from those parts which retained a natural appearance to these degenerated portions was abrupt, and marked by a rose-coloured line. These rose-coloured portions were chiefly in the parts nearest the surface; in the central parts this passed into the yellow or grey, and many portions were in a state of ramollissement. The whole left hemisphere, in fact, presented little else than a mass of concentric indurations and softening of the various colours which have been mentioned. On the upper part of the hemisphere, the disease did not extend entirely to the surface of the convolutions; but at the base of the anterior and middle lobes it extended to the surface and at one place there was a well-defined spot of superficial ulceration, the size of a split pea." (P. 339.)

Inflammation of the Substance of the Spinal Cord. This important subject has not yet been investigated with that attention which it merits; but there is reason to believe that inflammation of the substance of the cord, like the corresponding affection of the brain, may terminate fatally in four different forms: viz. in the inflammatory stage, by ramollissement, by undefined suppuration, by abscess. Ramollissement of the cord sometimes occurs in a chronic form, in which it may go on for a considerable time, even for years, before it is fatal. There is generally in these cases some uneasiness in the back, with paralytic symptoms, beginning in a part of a limb, and in a slight degree, and advancing very gradually to confirmed palsy. The lower extremities are most commonly affected, but in some cases the arms only, and in others all the limbs. There is sometimes permanent contraction of the affected limbs, and sometimes there are spasmodic affections of them; and the disease may go on in this manner for years, and at last be fatal by ramollissement. This form is illustrated by the following case, which the author saw with Dr. ALISON.

"A gentleman, aged forty-two, in October 1827, began to be affected with pain in the lower part of the back, stretching round the abdomen, and frequently shooting into the groins. After a short time this was succeeded by coldness and numbness of his feet, which gradually extended upwards with diminished power of motion, until, after several weeks, it terminated in perfect loss of motion of both lower extremities, with retention of urine. There was pain in some parts of the affected limbs, and in others a painful sensation of cold. This perfect loss of power continued five or six weeks, when, after a great deal of treatment by cupping, blistering, &c., he recovered a slight degree of motion, but no power of the bladder. He then began to be affected with spasms of the muscles of the back and abdomen, with a very uneasy sensation of tightness across the abdomen, and at times across the lower part of the thorax. The spasms occasionally assumed the characters of opisthotonos, and at one time he had almost incessant hiccup, which continued in a most violent degree for several days. After the employment of various antispasmodics, this subsided under the use of musk. During the course of these symptoms, he frequently complained of pain in various parts of the spine, at first in the lower part, and afterwards higher up; and the feeling of numbness extended gradually upwards, till it reached nearly the upper part of the dorsal region, and was felt in a very considerable degree along the sides of the thorax.

"After this he became liable to feverish attacks at night, terminating in the morning by very profuse perspiration; but this was strictly confined to the parts which were not palsied, and there never was the smallest moisture on the lower extremities. He had also, in the upper extremities, a frequent feeling of intense heat, while the lower continued cold and benumbed. During this time a considerable, but very imperfect, degree of motion continued in the lower extremities, but the bladder continued entirely paralytic.

"In April 1828, he went to the country, and at this time he had such a degree of motion as to walk a little on a smooth garden walk, leaning on two persons, or supported by crutches. But soon after this, he began to complain of pain in the head. It occurred in irregular paroxysms, and was often referred to a small defined spot, on various parts, especially behind the ear, and sometimes to the tip of the ear. This pain seemed to abate under the use of arsenic; but soon returned, and became more fixed and permanent, and the palsy of the limbs again increased. After an absence of about two months, he returned to town in the beginning of July. At this time the headach was severe, and the power of the limbs so much impaired that he was entirely confined to bed. In a few days after his return, the right arm became paralytic, and his speech considerably impaired. After a day or two these symptoms rather subsided, but in the following night he became comatose, and died in the afternoon. There never was complete

loss of sensation of the affected limbs: he had only complained of it occasionally at particular spots, and of a general feeling of numbness and coldness.

“*Inspection.* There were some scales of bone attached loosely to the inner surface of the dura mater of the spinal cord. The whole cord was of a pale rose colour, and in a state of complete ramollissement through its whole extent, being in every part entirely diffuent. The medulla oblongata was tolerably healthy, except a slight degree of softening on its anterior part; and there was also a degree of softening on the tuber annulare, which seemed to involve the origin of the fifth nerve. Beyond this the ramollissement became again more decided, extending along the crura cerebri and cerebelli, and considerably into the substance of the brain, at the part adjoining the crura. The brain in other respects was healthy, and there was no effusion in the ventricles.” (P. 364.)

It is difficult to trace the precise nature and progress of the affection of the cord, when the disease advances in so gradual a manner as in this case, and terminates in disorganization so complete and extensive. In tracing the history of the analogous disease of the brain, Dr. A. suggests, upon very strong grounds, that it is originally an inflammatory affection of a low chronic character, seated in a small part of the cerebral substance; that it may continue for a considerable time in the state of simple inflammation, and then subside; or that it may terminate by a permanent change in the structure of the part, generally with some degree of inflammation.

To the chapter on the *Affections of the Bones of the Spine* a case is added, which shows disease of the processus dentatus, complicated with a new formation, presenting the characters of fungus hæmatodes.

“A gentleman, aged twenty-two, of a scrofulous habit, in the early part of his life had suffered amputation on account of a disease of the knee, and afterwards was liable to pectoral complaints with hæmoptysis. In the beginning of the year 1828, he began to complain of pain and stiffness of the neck, referred chiefly to the left side of it, and much increased by the motion of the head. The pain sometimes extended into the larynx, and backwards towards the scapula. After considerable relief from repeated blistering, &c. the symptoms returned, accompanied by loss of appetite, frequent pulse, and night perspirations; and soon after this he became affected with difficult deglutition, some dyspnœa and hoarseness. There was now also severe fixed pain referred to the back of the head, and much increased by the motion of the parts; so that he was obliged to support his head with both his hands when he had occasion to make any change of his posture. He was next affected with paralysis of the tongue and the upper eyelid

of the left side. On 16th January, 1829, he was seized with paralysis of the left arm; and two days after the right was affected in the same manner. He had then great pain and difficulty in passing urine, with obstinacy of the bowels, which nothing could overcome. On the 29th, the lower extremities became paralytic, and he died on the 31st, having suffered greatly on the day on which he died, from difficult breathing.

“ *Inspection.* All the external parts of the neck, the pharynx, &c. were healthy, and no disease was discovered in any of the vertebræ in their external aspect. The brain and cerebellum were healthy, except some increase of vascularity. Within the foramen magnum, and attached to the inner surface of the dura mater, at its anterior and lateral parts, there was a spongy tumor of a greyish yellow colour, which, when cut into, presented a variegated structure, resembling fungus hæmatodes. The processus dentatus was rough and carious on its surface, and it was so much elongated as to project half an inch into the cavity of the cranium. Its ligaments also were partially destroyed so as evidently to allow it to encroach upon the area of the spinal canal, and to compress the cord. The spinal cord at the upper part was flattened, but not materially altered in its texture.” (P. 408.)

In regard to the treatment of the diseases of the spinal cord, Dr. A. does not enter into any long details, as it must be regulated by the same principles as the corresponding affections of the brain. In the more acute affections, we must, of course, rely chiefly on free general and topical bleeding, assisted by blistering, purgatives, and the other usual auxiliaries. When the affection is in a more chronic form, the treatment will consist chiefly in local applications, as topical bleeding, blistering, and issues, aided by the horizontal posture. In the earlier stages of such affections, Dr. A. thinks the most satisfactory treatment, after free topical bleeding, is by a succession of blisters, applied first on one side of the spine and then on the other, in quick succession, and repeated in this manner to a considerable number. In some of the cases great benefit is also obtained from continued moderate purging.

There are certain obscure and anomalous affections which present many of the characters of disease of the spinal cord, though their termination, in general, is more favorable. These affections assume a great variety of characters, and the nature of them is very obscure. The most common symptoms are various spasmodic affections of the limbs, or of the muscles of the back, sometimes resembling chorea, or even tetanus; and various degrees of weakness of the lower extremities, sometimes amounting to complete paralysis, which is often accompanied by remarkable

spasmodic affections of the paralytic limbs. There is generally a great feeling of weakness in the back, and frequently pain, which is sometimes confined to one part, but more commonly extends in a greater or less degree along the whole of the spine. Various affections of the breathing likewise occur, sometimes with attacks of palpitation, and different uneasy feelings in the stomach and bowels.

It is, indeed, difficult to say what treatment has any decided control over those affections; but the remedies which appear to be most beneficial are free and regular purging, or a combination of tonics and antispasmodics, with small doses of purgatives; strong friction; cold sponging, or shower bath; and blistering on the spine. These affections commonly pass off without leaving any bad consequences, sometimes very suddenly, and without any cause to which their removal can be ascribed.

Such attacks occur almost entirely in females, chiefly those of the higher rank, and are generally tedious and untractable. One of the most remarkable features is the connexion which they have, even in their most aggravated forms, with the state of menstruation. The following case, which is not contained in the first edition, illustrates this fact in a striking manner, and at the same time exemplifies some of the various forms which are assumed by those singular affections.

"A lady, now aged twenty-four, in the year 1823 was first affected with numbness and partial loss of power of the right arm and leg, and some time after had slight difficulty of articulation. These symptoms subsided under the usual treatment, and returned after some months, when they affected the legs and arms of both sides, and had more of the characters of chorea. After another interval of several months, she became liable to attacks of blindness, which were occasioned by a falling down of the upper eyelids, so that she could not raise them; and, when they were raised by the hand, the eyes were found to be distorted upwards. These attacks generally continued for several weeks at a time, and were relieved by cupping on the temples.

"With these symptoms the two first years of her illness passed. In the third year she was affected with convulsive action of the muscles of the back, and involuntary twitches of the legs and arms, producing convulsive motions of the whole body, which it is impossible to describe. These were much increased by touching her, especially on any part of her back; also by laying her upon her back, or even by approaching her as if with the intention of touching her. At one time there was difficulty of deglutition, so that attempts to swallow produced spasms resembling tetanus. At other times, after lying for a considerable time quiet, she would in

an instant throw her whole body into a kind of convulsive spring, by which she was thrown entirely out of bed; and in the same manner, while sitting or lying on the floor, she would throw herself into bed, or would leap on the top of a wardrobe fully five feet high. During the whole of these symptoms her mind continued entire, and the only account she could give of her extravagance was, a secret impulse which she could not resist.

"After a considerable time these paroxysms ceased, and she was then affected with convulsive motions of the muscles of the upper part of the back and the neck, producing a constant rotatory motion of the head. This sometimes continued without interruption night and day for several weeks together; and, if the head or neck were touched, the motion was increased to a most extraordinary degree of rapidity. During the attacks she could not sleep except in the sitting posture, the motion continuing during this imperfect sleep, though in a more moderate degree; but if she happened to slip down, so that her head touched the pillow, she instantly awoke with a severe convulsive start, and the motion was increased to the greatest degree of rapidity. These paroxysms were relieved by nothing but cupping on the temples to the extent of ten or twelve ounces, when the affection ceased in an instant with a general convulsive start of the whole body. She was then immediately well, got up, and was able to walk about in good health for several weeks, when the symptoms returned, and required a repetition of the same treatment. Sometimes, from the violence of the motion of the head, it was impossible to cup her on the temple. In this case the cupping was applied first on the back; and by this the motion was so far moderated as to allow it to be applied on the temple, without which the paroxysm was never removed. Bleeding from the arm to the extent of faintness only moderated it for a time, but did not remove it. Another very singular feature of the affection was, that it subsided fully only when it went off in an instant with a sudden convulsive start of the whole body: when it subsided gradually, as under the influence of large bleeding, it returned as soon as the faintness from the bleeding was removed.

"The affection went on in this manner, with intervals of tolerable health of a few weeks' duration, for about four years, besides the two years formerly mentioned. The longest interval was one of about three months; but even during these intervals various convulsive motions were excited by slight causes. Menstruation was all along extremely irregular and very scanty, and the bowels were torpid. She was of a pale and bloodless aspect, from the frequent bleedings, but not reduced in flesh. I saw her only at an advanced period of the disease, along with Mr. Gillespie, who had watched her through its whole progress, and by whom every variety of treatment had been employed with the utmost assiduity.

"At last, in the spring of 1829, we found her under a severe paroxysm of the rotatory motion of the head; when it was deter-

mined to allow the attack to take its course, and to direct our attention entirely to the menstruation. With this view she began to take three grains of the sulphate of iron three times a day, with two grains of Barbadoes aloes; the aloes being afterwards diminished according to the state of the bowels. She went on with this for nearly three weeks; the convulsive motion of the head continuing without intermission night and day. At length, in the middle of the night, the paroxysm ceased in an instant, with the same kind of convulsive start of the whole body with which it used to cease after cupping. At the same time menstruation took place in a more full and healthy manner than it had done for many years. She has continued from that time free from complaint, and able to walk several miles, and menstruation has occurred at the regular periods, and in a full and healthy manner." (P. 328.)

We have now drawn very largely from the additional cases with which Dr. Abercrombie has enriched the present edition of his very excellent work. The chapter on *Diseases of the Nerves* is also augmented by many interesting facts and observations, chiefly in reference to the practical importance and application of the physiological experiments and discoveries of BELL, SHAW, and MAYO.

But few physicians can have enjoyed the opportunities which have fallen to the lot of Dr. Abercrombie, of improving our pathological knowledge; and it would be unjust not to declare that he has turned his experience to the best account. The details of some of the cases might, perhaps, be compressed with advantage, and without any danger of obscuring their important practical features. We cannot but be struck with the great superiority of such works as those for which we are indebted to Dr. Abercrombie over the abstract speculations as to the proximate causes of disease, in which some pathological writers delight to dwell. The numerous and faithful records of disease given to the profession by Dr. A. can never lose their value, either to the practitioner or student. They are alike creditable to his industry and to his ability.

Elements of General Anatomy, containing an Outline of the Organization of the Human Body. By R. D. GRAINGER, Lecturer on Anatomy and Physiology.—8vo. pp. 526. Highley, London, 1829.

THE term "general anatomy," as it is employed by modern writers, is but of recent introduction. It designates that branch of anatomy which has for its object the investigation of the various tissues of the body, and is employed for this purpose by BICHAT, BECLARD, and MECKEL. Mr.

GRAINGER correctly observes, that in some respects this expression is objectionable; for, in its strict acceptation, it comprehends every thing that relates to the science of organization; but custom has sanctioned the use of it in this more limited meaning. It must be confessed that we are greatly, if not chiefly, indebted to the continental writers, amongst whom Bichat claims the most distinguished rank, for the great additional light that has, within the last few years, been thrown upon this most important branch of anatomical knowledge.

It is as essentially necessary for the medical and surgical student to possess a perfect acquaintance with the intimate structure of the various textures of the body, as that he should be correctly versed in mere descriptive anatomy.

When Mr. Grainger commenced the present volume, we had no work exclusively devoted to the consideration of the texture of the different parts of the human body. After he had collected his materials, the work of Dr. CRAIGIE,* of Edinburgh; appeared, to the excellence of which we have offered our meed of approbation. The plan of these works is, however, very different; and, even had they been entirely similar, much benefit would have been conferred upon the student by the labours of both writers.

The subject is too intricate and comprehensive to be exhausted by any single author, whatever may be his ability. It must even be still confessed that an ample field remains for investigation. We are yet to learn many important facts connected with "general anatomy," to remove many doubts, and to reconcile many conflicting opinions. An additional work upon the subject, then, cannot be deemed superfluous, and it could not have been in better hands than Mr. Grainger's, who is well known to the profession to possess those first and most essential requisites for increasing our stock of knowledge, talent and determined industry.

The object of the present work is to convey a concise, and at the same time a comprehensive, account of the several substances which form the human body. To the description of the different tissues some observations on their uses are added, for the purpose of showing how admirably each structure is adapted to the functions it is destined to fulfil.

It would be impossible to compress within the limits to which we are confined an analysis of each division of a work which comprehends so many subjects. We can but

* *Elements of General and Pathological Anatomy.*

give a general view of the contents, and then offer our opinion of the claim which the work possesses to the attention of the profession.

The introductory part of the volume embraces many very interesting points of discussion. It commences by the description of the distinctive characters which separate inorganic or mineral bodies from organic or living bodies. These two great divisions are distinguished from each other by certain properties, which are determined and invariable.

"The composition of inorganic substances is characterised by the following circumstances: 1. Its homogeneousness. 2. The independence of its molecules, each of which is capable of existing independently of the others. 3. The simplicity of its chemical properties. 4. Its peculiarity of constitution, consisting of gaseous, liquid, or solid substances, and never exhibiting a union of fluid and solid parts. 5. Its capability of being decomposed and recomposed.

"The composition of living beings exhibits, in all the preceding circumstances a striking contrast. 1. The living body is heterogeneous, consisting of dissimilar parts. 2. Its constituent molecules have a mutual and necessary relation to each other, and, consequently, cannot preserve an independent existence. 3. Its elementary substances are numerous, and combined in varying proportions. 4. The fluid and solid parts of which it is composed are intimately combined together, and mutually influence each other. 5. It is capable of decomposition, but totally incapable of artificial recombination." (P. 1.)

The origin or first formation of minerals results from the operation of external circumstances: thus they are produced by the separation of the particles which compose other minerals, or by the combination of elementary substances, which are united in virtue of their chemical affinities. Organised bodies, on the contrary, owe their origin to an internal operation, which is termed generation: in this process a substance, called a germ, is attached for a certain period to another similar being, from which it is subsequently detached, and then enjoys a separate and independent existence. The primitive attachment of every living body to a similar being, which bears to it the relation of a parent, is probably a rule without an exception. It was, however, supposed by the ancients that organised bodies might be formed like minerals, by the operation of the general laws of matter. The curious discoveries that have been made concerning the existence of the numerous species of infusory animalculæ, have induced several mo-

dern physiologists, among whom may be mentioned M. LAMARCK, to revive the doctrine of equivocal or spontaneous generation. The extreme minuteness of these animalcules renders it impossible to determine, by examination, whether they are formed simply by the combination of the surrounding elementary molecules, or from ova which had been previously deposited in the water used for the experiment. The probabilities are decidedly in favor of the latter opinion.

The line of demarcation is by no means so positively drawn between vegetables and animals, as between inorganic and organic bodies; for both the two former great classes participate in many of those properties which are the most essential attributes of organised bodies. Still the distinctive marks of plants and animals are numerous and decisive, and are thus enumerated by the author:

- “Vegetables are fixed to the earth, have no perceptible motion.
Have probably an obscure kind of sensibility, without consciousness.
Are composed of few elements, have much solid matter, and have carbon for their base.
Resist decomposition.
Are nourished by external absorption.
- “Animals move upon the surface of the earth.
Have sensibility accompanied by consciousness.
Are composed of many elements, have a large quantity of fluids, and have azote for their base.
Are readily decomposed.
Are nourished by digestion and internal absorption.”

Having pointed out these necessary distinctions between the different material substances which compose the globe of the earth, or which exist upon its surface, Mr. Grainger proceeds to describe the general structure of the human body, and then considers each part separately which enters into the composition of the animal frame. An excellent and clear description is first given of that most extensive and important of all the tissues, the cellular membrane. The serous and mucous membranes are next described at considerable length. The vascular, lymphatic, cartilaginous, fibrous, fibro-cartilaginous, and osseous systems, are also dwelt upon with due attention; and the various sections which are occupied in pointing out the many and interesting phenomena belonging to them will be studied with much advantage.

Mr. Grainger is opposed to Dr. Craigie upon the subject of the contractility of the capillary vessels. In our notice

of Dr. Craigie's work,* we contended that the experiments of Hunter, Wilson Philip, Thomson, and Hastings, satisfactorily proved the contractile power of these vessels. Dr. C. is of a different opinion.† As the subject is of much importance, not merely in a physiological point of view, but as our pathological notions and treatment of disease must be frequently modified by the ideas we entertain of the power of the capillaries, we extract the observations which Mr. Grainger offers. In our opinion, he takes a correct view of the subject.

"The actions of the capillary vessels are essential to the production of most of those operations which are required for the support of life. The opinions of physiologists are, in the present day, divided as to the existence of an active contractile power in these small blood-vessels; and when the great importance of the question is considered, we cannot be surprised at the number of writers who have engaged in the controversy. According to some authorities, the capillaries are merely passive tubes, which are not provided with irritability. Others, on the contrary, contend that they have a contractile power, which enables them to carry on the circulation quite independently of the heart: this power was called by Bichat, insensible organic contractility. Lastly, many excellent physiologists suppose that the capillary circulation is influenced by the action of the heart; but that the small vessels have themselves an active force, which enables them to assist in propelling their contents, and which may be exercised independently of the heart. As it would be difficult to reduce within the limits of this work the numerous considerations that are connected with this most comprehensive subject, I shall confine myself to pointing out some facts which appear to prove the correctness of the last opinion.

"It has been already shown that the propulsive power of the ventricle extends to the venous system. Now, as it is evident that that power must have previously acted on the capillaries, I conceive the first part of the position must be admitted, viz. that the capillary circulation is influenced by the action of the heart.

"The second part of this opinion may be substantiated by observing certain phenomena which occur in the human body, and by the results of experiments performed on the lower animals. It is well known that local action frequently takes place, by which blood, and other fluids, are determined towards individual parts of the body, without the heart's action or the general circulation being in the least affected. Mental emotion is often the exciting cause of the great local accumulation. Thus, shame causes blushing; voluptuous ideas produce erection; and the sight of food

* London Medical and Physical Journal, March 1829, p. 254.

† CRAIGIE'S Elements of General and Pathological Anatomy, p. 142.

excites, in a hungry person, a flow of saliva. At other times local action may be produced by mechanical irritation: for example, titillation causes erection of the nipple, a particle of iron renders the vessels of the conjunctiva turgid, &c. Again, in local inflammation, the activity of the small arteries is increased, although the condition of the heart is not affected. It has, indeed, been implied, by an author of great excellence, (Dr. Charles Parry,) that, in similar instances to those above mentioned, a prior action occurs in the heart, which is the occasion of the local distention. But, if this supposition were founded in truth, which there is great reason to think it is not, it would not explain the phenomena which are observed. Such an increase in the power of the heart would certainly accelerate the general circulation; but we cannot conceive how it could influence the flow of blood in any particular set of vessels, unless those vessels had themselves a local source of action.

“The important experiments which have been performed by Dr. W. Philip, Dr. Thompson, and Dr. Hastings, show, in a still more striking manner, the contractile power of the capillaries. Thus, the circulation continues in them after a ligature has been tightly bound around the leg of a frog; after the great vessels of the heart have been all tied; nay, more, after the heart itself has been removed, or has long ceased to act. The contractility of the capillary vessels may also be excited by the direct application of stimulants, without the action of the neighbouring arteries being at all influenced.

“The conclusion to which the preceding facts lead is, that the small blood-vessels are provided with an active and independent power, which materially assists the heart in propelling the blood onwards to the veins.

“The functions of the capillaries are much more important than those which are exercised in the other parts of the vascular system. The arteries and the veins are, in fact, entirely subservient to the action of these vessels: the former, by bringing the fluid material, the blood, which is destined to fulfil certain uses, and to undergo certain changes, as it traverses the capillary system; the latter, by returning the altered blood after the necessary processes have been accomplished. The general capillaries, or those placed between the termination of the aortic arteries and the origin of the common veins, are the agents which effect the vital functions of secretion and nutrition, in the completion of which, the blood experiences such changes, that it becomes deteriorated and unfitted for the purposes of the economy. The capillaries of the lungs are connected with equally important processes; for, in these vessels, the blood is renovated by being freed from the noxious principles it had acquired in the general circulation; and in the same tubes the chyle and the lymph are assimilated with the nutritious fluid.

"It is very difficult, or more correctly speaking, impossible, in the present state of our knowledge, to decide on the real nature of the phenomena which occur in the capillary vessels. They appear, however, to be of a mixed character, and to depend on the conjoined operation of mechanical, chemical, and vital actions." (P. 301.)

The section on the *reparation of fractured bones* is highly instructive, and gives a concise account of the opinions of different celebrated writers upon this important and practical subject. The older anatomists attributed the production of *callus* (by which term is understood the substance connecting the broken ends,) to the exudation of an osseous juice from the surface of the fracture, which, gradually acquiring consistence and hardness, at length united and soldered together the fragments. This opinion reigned in the schools till DUHAMEL, towards the middle of the last century, opposed it, by publishing the results of his experiments. He found that, shortly after a bone was broken, the periosteum, being thickened and inflamed, was glued to its outward surface, and that in a few days later, when the swelling of the membrane was increased, its internal layers were converted into cartilage, and ultimately into bone. From the result of his extended inquiries, Duhamel concluded that the periosteum was the part principally concerned in the reparation of fracture. The statements of Duhamel accord in many respects with the latest and best accounts which have been given of the formation of callus.

"The ingenious and exact investigations of Mr. Howship have determined most of the disputed points connected with this question, and have also explained several of the causes that have been most fertile in producing the diversity of opinion which has so long existed among physiologists. These facts perfectly accord with those ascertained by Dupuytren and Breschet, and therefore they may be received with the greater confidence. There is so much resemblance in the conclusions of these observers, that it would be an invidious task to apportion the credit that each individual deserves; but it is due to the character of the English experimentalist to state, that, although the papers of Dupuytren and Breschet had the priority as to publication, there is no reason to suppose that they were known to Mr. Howship previous to the appearance of his memoir.

"We learn from the united labours of these physiologists, that the first effect produced by a fracture is the effusion and coagulation of a large quantity of blood, which is derived from the lacerated vessels of the bone, of the periosteum, and even of the surrounding structures; the quantity being proportioned to the

violence of the accident. This coagulum surrounds and unequally adheres to the broken ends, and a portion of it is deposited within the opening of the medullary canal, with which it is connected; the periosteum is also completely charged with the effused blood. The vascularity of the medullary membrane in the seat of the fracture is greatly increased, producing a bright vermilion-coloured surface, in which, with the aid of the microscope, the vessels may be seen quite entire. In the femur of the rabbit, no arteries could be detected passing into the coagulum, as late as the fifth day after the fracture. In a few days afterwards, the colouring part being removed, the extravasated blood becomes pale: at this period the periosteum is greatly thickened, and has been even found a quarter of an inch in thickness; it has a transparent pearly hue, and assumes by degrees the characters of true cartilage. The swelling and firmness of the periosteum, and of the surrounding parts, appear to be a provision of nature to guard against the least disturbance or motion between the fractured ends during the act of union.

"A deposit of osseous matter is made in the cartilaginous periosteum, and also in the coagulum that closes the medullary cavity: it is worthy of remark that, in the latter part, the deposition, as in the original formation of bone, advances from the circumference towards the centre of the coagulum. Mr. Howship found that the fractured ends of the femur of a rabbit were covered, on the twenty-third day, with a considerable quantity of new bone, clothed externally with a well-injected membrane or periosteum. After the bone is firmly united by the callus which is deposited between its extremities, the thickened periosteum and the surrounding soft parts are gradually restored to their original condition; and the ossific matter, which had been temporarily secreted so as to form an external callus, is slowly removed by the action of the absorbents.

"Baron Dupuytren concludes from his investigations, that there are two distinct processes in the union of fracture, or rather that a double callus is formed. The first, which he calls provisional callus, '*cal provisoire*,' is formed by a deposition either in the periosteum alone, or in that membrane and in the cellular, and even in the muscular tissues. This secretion forms a kind of clasp which surrounds the broken ends, and also adheres to them. At this period the surfaces of the fracture are not united, but they are surrounded and supported by the new formation. In the space of four or five months, provided there has been perfect coaptation, and there is no irregularity around the fragments, the osseous substance which has been temporarily produced decreases in quantity, and the periosteum and the cellular tissue return to their original condition; lastly, at about the eighth month, the definitive or permanent callus is formed, by which the surfaces of the fracture are firmly joined." (P. 415.)

The tenth and eleventh chapters contain very complete descriptions of the muscular and nervous systems. An account is given of the arguments and experiments of Mr. BELL upon those nerves which he terms *superadded*, or *respiratory* nerves, and of the ingenious comments upon these experiments by Mr. MAYO,* which tend to throw much doubt upon some parts of Mr. Bell's celebrated theory. Upon this subject we shall enter at some length in our succeeding Number.

In concluding his observations upon the functions of the ganglionic system of nerves, Mr. Grainger alludes to an error, which, having received support from very high authorities, has had an injurious effect upon our inquiries concerning the functions of the nervous system. "I allude to the doctrine according to which the ganglia are provided to cut off the parts they supply with nerves from all connexion with the brain. The fallacy of this opinion has been demonstrated by Dr. Wilson Philip, as far as the ganglions of the great sympathetic are concerned; and in an equally satisfactory manner by Mr. Bell, with respect to the ganglions of spinal nerves."

The general sketch we have given of Mr. Grainger's work will be sufficient to show the subjects it embraces. It contains abundance of information, which it behoves the student to make himself thoroughly acquainted with; for, without a perfect knowledge of the intimate structure of every part of the human body, it is impossible he can see clearly through many of the most important morbid processes with which he will have to contend when he enters upon the practical duties of his profession.

* See Anat. and Phys. Comment. part i. p. 107; and Outlines of Physiology, by HERBERT MAYO.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Experiments which clearly prove that the Nervous Tissue possesses the property of developing the Galvanic Fluid. By Dr. LOUIS BERAUDI, of Turin. (*Annali Universali di Medicina*, 1829.)

THE numerous experiments of WILSON PHILIP, EDWARDS, VAVASSEUR, ALDINI, MAGENDIE, KRIMER, and WIENHOLD, establish the fact that the nervous system develops galvanic phenomena. Dr. BERAUDI has instituted a series of experiments for the purpose of collecting the galvanic fluid that is thus formed, that no doubt may any longer attach to so curious a fact. The following are the results of these experiments.

1st. Dr. B. exposed the right crural nerve of a living rabbit, the temperature of the apartment being raised to 15° Réaumur. After having carefully removed all the blood, three small and very fine steel needles were introduced into the nerve: they were separated by a small stick of sealingwax placed horizontally. The animal evinced great pain, and at the end of a quarter of an hour it was found that the needles had not acquired the power of attracting small pieces of paper. The same needles were again introduced into the nerve, and, upon being withdrawn at the expiration of a quarter of an hour, as before, each needle was found slightly to attract small particles of rust of iron, whilst the bits of paper remained unmoved.

2d. The same experiment was repeated, on the same day, on another rabbit, but without a similar result. It had been observed that the development of the electric fluid diminished in a direct ratio to the slowness of the circulation. Pulmonary insufflation was therefore had recourse to, and at the expiration of ten minutes the magnetic property of the needles was very manifest. From this fact Dr. B. concluded that the strength of this property of the needles, produced by the nervous tissue, was in proportion to the greater or less quantity of blood exposed to the contact of the air. This remark was communicated to Professor ROLANDO, who recommended Dr. B. to vary the experiment, by causing the animal to respire different gases.

3d. The apartment being of the same temperature as above mentioned, it was found that, by introducing into the lungs oxygen, hydrogen, and azote, the magnetic property developed in the nerve was very powerful after the insufflation of the first of these gases, weaker from that of the second, and not at all apparent from that of the azote.

4th. After having divided the spinal marrow of a rabbit, between the third and fourth cervical vertebræ, needles were introduced as before into the crural nerve; but in neither was the magnetic property detected, until a certain quantity of oxygen had been introduced into the lungs: it then was very manifest.

5th. The right optic nerve of a rabbit was exposed, and one needle introduced into it; which was withdrawn in eight minutes, and exhibited no magnetic property. The animal was then made to respire oxygen gas, by means of a bladder which was filled with it; but still no magnetic effect was

produced. Neither hydrogen nor azotic gas produced any effect. At the expiration of an hour, the same needle was introduced into the crural nerve of the same rabbit. The animal was again made to respire oxygen gas, and a weak magnetic property was then perceptible in the needle; which was no longer developed when the experiment was repeated after having divided the spinal marrow at the part above mentioned.

6th. The same experiment was repeated, in presence of Professor Rolando, upon the olfactory nerves, but without any result.

7th. A ligature was placed upon the crural nerve of a rabbit, into which needles were introduced *below* the ligature. No galvanic phenomena were produced. The same was also the case after the division of the nerve.

8th. Dr. B., after the manner of M. Vavasseur, endeavoured to ascertain whether this property, which was imparted by the nerve, could be communicated at any distance. To determine this fact, the crural nerve of a rabbit was laid bare and divided; and the extremities of the nerve then separated to a distance of about four lines. A needle was placed in the inferior portion of the nerve, and it was found that it had, in a minor degree indeed, acquired the magnetic property. This result confirmed Dr. B. in the opinion that the nervous influence is developed at some distance, which he had before presumed from finding the magnetic property of the needle diminish and disappear from the inspiration of hydrogen and azote.

As all philosophers believe that the galvanic fluid is capable of imparting to iron a magnetic property, and as the identity of these two fluids is admitted, the following results are deducible from the above experiments:

1. Electricity develops itself in the nervous system.
2. The fifth and sixth experiments confirm the theory of Prof. Rolando.
3. Respiration appears to have considerable influence upon the development of the galvanic fluid in the nervous system.
4. It may be presumed that the galvanic fluid does not emanate from every part of the nervous system, but perhaps from the cerebellum, as Mr. Rolando supposes.

Lastly. That neither the olfactory nor optic nerves concur in the development of that fluid.

Dr. Beraudi does not claim the merit of first conceiving these experiments. He is aware that BECLARD had before ascertained and announced, that a needle becomes magnetic from being introduced into a nerve.

Malformation of the Œsophagus and Stomach in an Infant. By Dr. PAGENSTECHER. (*Archives Générales.*)

A woman, named Godvin, having passed through the proper period of pregnancy without any accident, was delivered of a full-grown and externally well-formed female child. It was soon found that the infant could not swallow, and that after a few seconds it threw up the milk it had taken. For four days the life of the child was supported by milk clysters, but at the end of that time it died. Upon opening the body, the Œsophagus was seen to terminate in a cul-de-sac, near the bifurcation of the trachea, about fourteen lines below the pharynx. A small cellulo-fibrous band arose from the anterior part of the cul-de-sac, and terminated in the extremity of that portion of the Œsophagus which was attached to the stomach, and which was about one inch and nine lines in length. The structure of the stomach was porous. Its mucous and muscular membranes formed a kind of net, the meshes of which

were closed by the peritoneal tunic, which was itself pierced in different places. The meshes were from a quarter of a line to a line in diameter, and were more than a hundred in number.

This case refutes the opinion of those physiologists who explain the nutrition of the fœtus by the deglutition of the water of the amnion, which was in this case obviously impossible.*

Account of a living Duplex Child. Communicated by CHARLES BELL, F.R.S. to whom the letter is addressed. (*Medical Gazette.*)

My dear sir,

Teddington; 17th Sept. 1829.

A recent excursion to Switzerland gave me occasion to see, on the 1st of August last, at Geneva, a remarkable example of a living *lusus naturæ*, or monstrosity in the human frame: namely, twin infants furnished with two heads, two necks, and four arms, but grafted or united side to side, so as to form only one female body, terminating in two legs, or inferior extremities of usual shape. This phenomenon presents nothing disgusting to the beholder: on the contrary, the intelligence which already begins to develope itself in the heads, makes it an object of great interest. I had not the opportunity of a very minute personal examination, in consequence of only seeing it at the hour of its daily exhibition to the public; but my observation verified the accuracy of the subjoined description, by Mons. F. MAYOR, which was published in the *Journal de Genève* of the 30th of July:

Marie-Terèse Parodi, thirty-two years of age, the mother of several perfect children, gave birth, on the 12th of March of the present year, to a double child, now 140 days old. The one to the left was baptized by the name of Christina, the other by that of Harriet.

At the first glance it is perceived that twin infants have become grafted together: however, when they are regarded from before, the lower parts of the body appear simple from the stomach downwards, while the chest is divided at its upper part, at least on one side of the trunk. A more attentive examination speedily enables us to recognise the following peculiarities: Anteriorly, the chest only appears to form one thorax; the sternum forms a kind of gutter at its inferior part, while above it widens and enlarges very much, in order to give attachment to four well-formed clavicles, two of which are fixed at the external angles of that bone, and the other two at the middle of its superior border. Each of these four clavicles is directed towards one of the shoulders, and gives all the support necessary for the movements of the arms, of which two are placed between the heads. The right edge of the sternum appears to give attachment to the right ribs of Harriet, and the left to the corresponding ribs of Christina. There are four mammæ; the two in the middle being smaller than those which are external to them, and are encroached upon by the armpits of the middle set of upper extremities. There is but one umbilicus. When the examination is made from behind, two spinal columns are distinctly seen, sufficiently separated from each other at the upper part of the body; but they approximate towards the sacrum, of which there are two, united by the left edge of the one and right of the other, in such manner, however, that the os sacro-coccygis are quite distinct. From each

* How was the fœtus nourished, which was born alive, and which had neither funis nor umbilicus? From this remarkable case, MASON GOOD was led to infer that the "liquor amnii is the proper source of nourishment to the fœtus." Vide London Med. and Phys. Journal, p. 167, Feb. 1829.—EDITORS.

vertebral column there arise ribs, which are directed towards each other: the four or five first run to the anterior sternum; but the rest are united to those of the neighbouring body, at least by their external surface, and appear only to form one circle with those of the anterior part of the trunk. Thus, then, the thoraces are really separated externally throughout their upper third and probably entirely so within: the posterior ribs of this double trunk participate in the movements of respiration, in the same way as those of the anterior part. The beating of the heart in Christina is perceived at the anterior and left surface of the trunk; the beating of the heart in Harriet is seen at the middle part of the posterior surface. Beneath the ribs of this same side there is, between the two spinal columns, an abdomen twice as small as that on the anterior surface of the trunk. Harriet has had from her birth some malformation of the breast, for it is not long since the blueness with which she was affected began to disappear. For some days she has had a catarrhal affection, and her pulse was at 168 in a minute, while her sister enjoyed perfect health, the pulse not exceeding 144 in the minute. Their breathing is not always synchronous: however, there is reason to believe that a communication exists between the lobes of the lungs of the two children. The one sometimes sleeps while the other is awake; sometimes sucks while the other plays, or wishes also to get the breast; but never has one an evacuation without the other making the same efforts, which even wake her, if asleep. As they grow older, other and yet more interesting phenomena will doubtless be observed.

Examples of this kind of union are happily but little common, and it is but rarely that they survive their birth. A good many cases, indeed, are mentioned by authors, but most of them are apocryphal; some, however, are well authenticated: such, for example, as the two Hungarian girls, spoken of by Buffon, who were united by the loins, and who lived twenty-one years. Another case of a similar kind occurred at Verdun, in 1769: here also two females were united, and in the same manner; they were then seven years of age, and could walk; and their intelligence was so great that they had acquired several languages. There is also an instance in which two little girls were united from the lower part of the sternum to the umbilicus. The accoucheur divided the parts, and, thus separated by an operation, the children lived.

In 1495, there were born, near Worms, twins united by the forehead: they lived for ten years, when one died, and the other was separated by an operation; but it proved unavailing. In 1525 a native of Savoy, thirty years of age, and of the ordinary stature, exhibited himself. He had hanging from the sternum a body about a foot in length, having feet and arms, but without motion, while the head appeared as it were planted in the body of the man. In 1538 there was in Bavaria a female mendicant with two heads, who was driven from the country lest the pregnant women should give birth to similar monsters; a fear as imaginary as the result of it was cruel and uncharitable. Buchanan, in his History of Scotland, mentions the case of a monster with two heads, which lived twenty-eight years. The two heads, having different volitions, often quarrelled. They both felt wounds of the lower part of the body, but those of the upper part were only perceptible to the corresponding head. In 1552 a French woman, at Geneva, was brought to bed of a monster, the heads of which were united by the posterior part, and the union extended to the lower part of the back. Gaspard Materier took a portrait of

it. The monster lived some hours, and is compared to Janus by a writer (Lycosthene) who describes it.

Before we conclude, we may allude to the opinion, which has been frequently started and recently renewed, that such monsters ought to be destroyed immediately after their birth. *No one can have a right to do so*; for, since God ordains that such beings should come into the world, the laws owe them protection. Besides, it would be very difficult to determine the degree of imperfection at which an infant would cease to have a right to live; for these phenomena are met with from a simple supernumerary tip of the ear up to the example above mentioned, of two girls who were successfully separated by an operation.

The catarrhal affection, with febrile excitement, under which the twin named Harriet laboured on Thursday the 28th July, noted by Mr. Mayor, had subsided on the 1st August, and she then had an appearance as healthy and lively as Christina. Both infants seemed to exercise some control over the motion of the lower limbs; but, should they live until their mental faculties and animal powers are further developed, it will become a matter of curious inquiry to ascertain in what manner nervous influence, springing from two distinct organs of sensation and volition, shall be directed towards the lower extremities, so as to effect locomotion in accordance with the will of each sensorium; or whether there shall be occasional contentions between the *heads* for a dominating power over the *legs*.

Although the precise peculiarities of structure in the abdominal viscera, and the question as to whether the internal organs of generation correspond in unity and simplicity with the external, are points which cannot be fully determined till after death; yet, from the circumstance of each infant taking food with avidity at different times, it may be inferred that each has its proper stomach, and that the union of the alimentary canal takes place below that organ.

Many facts desirable to be ascertained hereafter, during the growth of this extraordinary animal phenomenon, must arise, referring especially to anatomy and phy-iology; and, as you have been long an eminent professor of these branches of medical science, I am induced to address to you this letter, in the belief that it may invite you to gratify your own zeal, and to indulge that of the profession, by instituting further inquiries, from time to time, regarding the interesting subject of it.

I remain, my dear sir, very faithfully yours,

J. BORLAND.

PATHOLOGY.

Metastasis of Leucorrhœa. By Dr. WASSENFUIR. (*Rust's Mag.* t. xxvii. 26 cah. 1828, p. 295.)

A young lady, mother of several children, had been affected with leucorrhœa for several years, which resisted every treatment that had been employed. Dr. W. prescribed baths and aperients, and at the same time injections into the vagina of corrosive sublimate. On the third day the discharge from the vagina had entirely ceased, but a precisely similar discharge issued from the mouth. It resembled that which had appeared from the vagina, in consistence, colour, and quantity. The mucous membrane of the mouth was redder than natural, swollen, and very painful. It resembled the appearance which

is seen in cases of aphthæ. The diagnosis, however, was not difficult; and the lady requested the disease might be removed to its original seat! In eight days this object was effected, and the discharge of the mouth speedily subsided.

Pustules and Vesicles on the Tongue in Hydrophobia.—Dr. F. FUCHS, of Rapperschwyl, relates a case of hydrophobia, (*Rust's Magazin*, tome xxvii. 3e cah. 1829, p. 514,) in which the appearances upon the tongue corroborate the statements of previous observers. Upon the upper surface of the tongue, near its base, were forty or fifty small brown pustules, regularly disposed upon each side of the organ. These pustules were rather prominent, and covered by a thick and tough envelope. Most of them had a black point in the centre. They were very distinct from the natural papillæ of the tongue. In other respects the tongue appeared healthy. Neither the submaxillary nor other glands were swollen.

In another case, a crowd of vesicles were seen upon the base of the tongue, the largest of which were about the size of a pea. They contained a thick lymph.

Vaccination from the Cow.—Some cows, in Hyde park, were recently affected with an eruptive disease on the udder, supposed to be cow-pock. Two attempts were made to propagate the disease to the human subject, but in both instances the experiment proved inefficient. In one case, no apparent effect was produced; and in the other only a transient and incomplete papulation resulted, and which died away without running on to vesication. At the time we saw the disease in the cow, it had passed into the form of crusts, from beneath which oozed a certain quantity of purulent matter. The genuine vaccinia in the cow would appear to be a rare disease in this part of England: several attempts, similar to the above, have been made here, with an equally unsatisfactory result.—*Med. Gazette.*

SURGERY.

Extirpation of Diseased Ovaria. By Dr. HOPFER. (*Grüße und Wallher's Journal für Chirurgie*, tome xii. 1er cah. 1828, p. 60.)

Three cases are related. One woman survived and bore a living child after the operation. The diseased ovarium which was extirpated weighed eight pounds. The two other patients died a few hours after the operation. Dr. CHRYSMAN appears to have been the first surgeon who performed this operation in Germany.

Lithotomy, à deux temps. (GIBSON's *Medical Sketch of Dumfriesshire*.)

I was present when Mr. LIZARS, of Edinburgh, performed the operation of lithotomy in this town, during the present summer. It was speedily and simply done. One calculus, the size of a pigeon's egg, was easily removed, as soon as an opening had been made into the bladder; when another was discovered, somewhat larger than the first, but, owing to the firm contraction of the fibres of the wounded bladder, it could not be readily removed at the time, and Mr. Lizars put his patient to bed; assuring his medical friends that all further attempts to remove the calculus would only tend to bruise and irritate the bladder and adjacent parts, and render inflammation more liable to occur.

He was confident, he stated, from experience, that, on the third day from the operation, the calculus would be easily removed, with scarcely any pain to the patient. Accordingly, on the day appointed, those who were present at the operation were in attendance, and saw Mr. Lizars gently introduce his finger into the wound, while the patient lay in bed, and then guiding a scoop along his finger, bring out the calculus, which was as large as a chicken's egg, with all the ease imaginable. The patient, a gentleman of sixty-four years of age, had a quick recovery.

Mr. Lizars speaks highly of leaving the calculus till the third day, when it cannot be readily extracted at the time of the operation. By that time the suppurative process has commenced, and all the parts concerned are quite relaxed. This is the method introduced by the French surgeon FRANCO, as the "*opération à deux temps*," and which has been condemned by some of our modern writers.

Mr. SAMUEL COOPER strongly reprobates the practice of putting a patient to bed with a stone in his bladder; and advises that, rather than do this, we should make an opening adequate for its extraction; or, if this cannot be done, he tells us to break down the calculus, and remove its fragments. If the long and constant irritation of a calculus, or calculi, has the effect of thickening the coats of the bladder, and diminishing its capacity, and if the cutting into that viscus causes its fibres to contract and firmly grasp the calculus, as the uterus does its placenta when about to throw it off, (both of which occurrences experience shows us to be almost invariable attendants on this disease, and the operation for its removal,) then all reiterated and painful attempts to remove or break down the calculus will not only be improper, but must also tend greatly to endanger the life of the patient.

The cases in which Mr. Lizars has tried this operation *à deux temps* have been attended with the greatest success, and he has removed, on the third day after the operation, very large calculi, with the utmost ease. He has hitherto made one or two gentle endeavours to bring away the calculus at the time of the operation, but, if he does not readily succeed, the patient is put to bed. So convinced is this expert operator of the superiority of this plan, that he has declared to his medical brethren, at the operation I have just mentioned, that, were it his misfortune to be obliged to submit to the operation of lithotomy, he would not suffer the forceps or scoop to be used before the third day.

Lithotrity.—M. SEGALAS recently communicated a case to the Académie Royale de Médecine, in which lithotrity was practised successfully upon a little girl, only three years old.—*Archives Générales*.

Académie Royale de Médecine. New Mode of arresting Hemorrhage.

M. AMUSAT recently described to the Academy his new mode of arresting hemorrhage from large blood-vessels, without ligature, compression, or any of the means previously resorted to. He ascertained, from a series of experiments, that the laceration or contusion of large vessels in most cases produces but a momentary suspension of hemorrhage, and that it is *permanently* arrested by a methodical contortion of the bleeding vein or artery. He suggests the following plan.

The vessel, being seized with a pair of forceps, the branches of which are

firmly fixed by a screw, is extracted so as to be denuded for about six lines. After having been freed as much as possible from the surrounding cellular tissue, it is held between the forefinger and thumb of the left hand, whilst the forceps are twisted five or six times, according to the size of the vessel, until the portion between the teeth of the instrument is lacerated. The artery then spontaneously retracts, and is seen and felt to pulsate, though the bleeding is completely stopped. Upon examining the vessel, it appears that the internal coat is divided as by a ligature; that it contracts, and forms a kind of circular pad, by which further hemorrhage is obviated. It is important that the extremity of the vessel should be fixed between the fingers of the left hand, or else the contortion will extend through the cellular tissue as far as the next collateral branch.

Mr. A. informs us that, in many experiments on rabbits, dogs, and horses, the most complete success has resulted from this plan. In one case of contraction, and another of amputation of the thigh, in the human subject, it has also succeeded. He likewise tried its effect upon ossified arteries in the dead body, and found it succeed; but he doubts whether this would be the case during life. In horses, although the parietes of the vessels are of considerable strength, M. Amusat arrested hemorrhage both from the carotid and jugular vein. To determine the value of this novel plan in comparison with others, he several times tied the crural artery on one side in dogs, and contorted that of the other side. In two cases where fatal hemorrhage ensued, it took place from the side where the ligature had been employed. In the first place, this mode of proceeding has the merit of great security. It is said also to possess many advantages over other methods, from its greater facility. It admits of immediate reunion of the wound, and is readily applicable in many cases where it would be difficult to apply ligatures without the risk of including other organs.

M. LEVERT on *Metallic Ligatures applied to Arteries.*

Some years ago Dr. PHYSICK suggested the propriety of an animal ligature, thinking that it would be removed by the absorbents: the external wound might therefore be closed, and all the bad effects produced by the ordinary ligatures thus obviated. We cannot say positively what has been the result of this practice, but believe that the animal ligature is not used so much as its importance demands.

The same gentleman has likewise suggested the use of leaden ligatures, with the view of obtaining such results as were hoped for from his animal ligature, or the temporary one of Dr. JONES. To this he was led by a knowledge of the fact that bullets, buckshot, and lead, would remain in contact with almost any tissue of the body, without producing irritation or unpleasant consequences, and that for an indefinite period. So far as I know, a trial of this ligature has never been made: with a view, therefore, to ascertain its effects, I have instituted a number of experiments, the results of which I will now relate.

EXPERIMENT I.—On the 16th of March, 1828, I laid bare the right carotid artery of a dog, and, after separating it carefully from its accompanying nerve and vein, I passed under it a lead wire, and tied it firmly. Both ends of the wire were then cut off with a pair of scissors, and the sharp points bent down with a common dissecting forceps. The wound was now drawn

together with a few stitches of the interrupted suture, and over these were laid some adhesive strips. This animal was not confined, but suffered to run at large. When I examined him several days after, I found the stitches ulcerated out, and the wound open; it had filled up from the bottom with granulations, but the edges of the skin were separated to a considerable distance. With light dressings, it healed entirely by the 5th of June.

June 28th.—I killed this animal, and dissected with care the neck. A small cicatrix existed in the skin; the lead was found in the situation in which I had placed it, by the side of the vein and nerve, perfectly encysted. The artery at this place had been removed entirely, for the space of half an inch.

Both ends of the vessel, caused by this removal of its central portion, adhered by loose cellular substance to the surrounding parts, which appeared to be in a perfectly natural state. The end towards the heart was not at all increased or diminished in size; it was sealed up for three eighths of an inch in extent, by an organised substance, resembling a coagulum of blood in colour, but not in consistence, it being much firmer. The end towards the head resembled the one just described, in all particulars: the substance, however, which filled its extremity was of greater extent, and occupied the whole space up to the next branch, which was rather more than half an inch.

Not the slightest trace of inflammation existed in the neighbouring parts: on the contrary, they appeared perfectly natural. The lead itself was enclosed in a dense cellular substance, which formed for it a complete cyst.

EXPERIMENT II.—The right carotid artery of another dog was separated from its contiguous parts on the 17th of May, and a lead wire placed around it, as in Experiment I. The lips of the wound were kept in contact with sutures and adhesive strips. I examined it three days after, and found that it had united by the first intention in the whole of its course, except in those points included by the stitches: these I cut loose, and dressed it simply with adhesive strips. When I looked at this dog again, I found that, from the itching of the wound, the animal had scratched off the dressings, and broken up the new adhesions: I washed it carefully to remove the dirt, and dressed it with simple dressings. It healed kindly, and was entirely well on the 6th of June, at which time I killed the dog, and made a careful dissection of the parts. The cellular substance here was much thickened and indurated, forming a strong bond of union between the nerve, vein, and artery. The two former were in their natural condition; the artery was pervious its whole extent, to within three eighths of an inch of the wire. At this place the caliber was entirely obliterated; a firm substance, resembling bruised muscle, filled its cavity. Between the ligature and the head the artery was impervious, and much diminished in size, having the appearance of a mere cord, not exceeding one fourth the original dimensions of the vessel. The lead preserved its situation around the artery; it had become entirely encysted, and not the slightest remains of inflammation existed.

EXPERIMENT III.—I cut down on the left carotid of a third dog, on the 29th of May, and proceeded as in Experiments I. and II., differing in no respect, except in dressing the wound: I used no stitches, but merely adhesive plasters.

June 1st.—I examined the wound, and found that it had united through its whole extent; but, as I supposed the union not to be very firm, the strips

were reapplied, and suffered to remain on until the 5th, when they were removed altogether.

June 27th.—The animal was killed, and a minute examination made. The lead wire was found around the vessel, which was impervious for an inch or more, as in the former experiments. The surrounding parts healthy.

EXPERIMENT IV. June 9th.—The dog which was the subject of the last experiment, having entirely recovered from the first operation, now became the subject of a second, which was performed on the carotid of the opposite side. This was conducted exactly as the preceding, the wound united by the first intention without the least difficulty; no constitutional symptoms manifested themselves.

On the 27th, at which time this dog was killed, an examination was likewise made of this side of the neck: the appearances corresponded exactly with those of the preceding experiments.

EXPERIMENT V. August 5th.—I performed a similar experiment on the carotid of another dog. I killed him on the 3d of September, and found that the appearances differed in no respect from the foregoing.

The lead having answered my expectations so well in these cases, I felt a great inclination to ascertain whether that substance alone possessed the property of remaining in contact with the living tissues, without exciting irritation or any unpleasant consequences, or whether similar results might not be obtained by using the other metals. I accordingly continued the subject, using gold, silver, and platinum, instead of lead.*

From the experiments now detailed, we may, I think, conclude that the plan of tying arteries with lead and the other metals is free from danger, and may be productive of some peculiar advantages: more experience, and a greater number of experiments, are necessary to establish this point thoroughly, and it is to be hoped that some one, fully competent to the task, will prosecute the subject.—*American Journal of Med. Sciences.*

Improved Method of treating Laceration of the Perineum. By Dr. DIEFFENBACH, of Berlin. (*Chirurgische Erfahrungen, besonders über die Wiederherstellung Zerörter Theile, &c.* Berlin.)

Dr. D. has turned his attention chiefly to the worst description of cases, where the rent extends along the whole perineum, so as to make a communication between the rectum and vagina, and render the patient incapable of retaining the feces. It has been generally conceived that the operation for reunion of the lacerated perineum is undertaken with the fairest prospect of success during childhood, because the parts have not acquired that callosity and indolent character which they assume when of old standing. Dr. D., however, opposes this practice, and maintains that it has appeared more successful than the contrary system, only because the lacerations which are commonly healed in this way are of insignificant extent, and will on that account heal at any time. In the instance of an extensive laceration which connects the rectum with the vagina, he urges that, if we take into consideration the exhaustion the patient must have endured from the kind of labour by which alone so severe an injury could have been produced; the impossibility

* We do not give the various experiments made by Dr. L. with these metals, as the results were materially the same as from the use of lead.—Ed.

of making her preserve, in her debilitated state, for an adequate length of time, the position requisite for the cure; the obstruction which the healing of the wound will experience from the flow of the lochia, and the preternatural secretion of the vaginal mucus for some time after delivery; and the contused nature of the wound which is to be united; it must be preferable to wait till the patient's health is restored, even although the sides of the wound should become indurated, because there is no difficulty in giving them, with the knife, surfaces much better fitted for adhering than the original surfaces of the laceration.

He proposes that, before the operation is begun, the intestines shall be thoroughly cleared out by laxatives and clysters; after which opium is to be given, and repeated at intervals, to prevent any discharge from the rectum for eight days at least.* The surfaces being brought into the state of a fresh wound by the removal of their indurated exterior, they are to be brought closely in contact at the centre by a strong knotted suture, which is introduced in such a manner as to pass through the loose cellular tissue at the bottom of the wound; two small needles, with twisted sutures, are then to be introduced through the lips of the wound, on the vaginal side of the principal suture; the little slit in the rectum itself is then to be united by two knotted sutures, introduced with small stitching needles; and two twisted sutures are lastly passed through the lips of the wound, between the rectum and great central suture. The ligatures and ends of the needles are cut away as close as possible.

The most important part of the operation still remains. This is the dividing of the integuments on each side of the wound, by an incision running at the distance of half an inch, in nearly a parallel direction with it, but curved a little outwards at the middle. These incisions are no sooner made than the stretched state of the newly united parts at once ceases; the central wound retires backwards, so that the lateral cuts appear like free incisions or steps with sharp edges, and the slight movements of the patient, which it is impossible to prevent altogether, have no influence on the sutures or the adaptation of the surfaces.

The treatment consists in the constant employment of cold poultices for the first few days, the careful cleaning of the parts by squirting warm water, restriction to a low diet, and the maintenance of the constipated state of the bowels for eight days. A T bandage, or any more complicated bandage; a pessary, or sponge, in the vagina, or any of the other mechanical means resorted to for maintaining the parts in a state of rest, is unnecessary by this mode of operating, and many of them cause inconvenient irritation. The removal of the urine by the catheter may be advisable, but is unnecessary if the hair has been shaved away from the parts before the operation. About the fourth or fifth day, lead lotions may be substituted for the cold poultices, and charpie placed on any spots which are suppurating. The sutures may be gradually withdrawn between the fifth and tenth days.

Not unfrequently, although the parts have united generally, a small rent is left in the rectum. This, however, is commonly found to heal up gradually,

* This precaution is important. A case recently occurred under our own observation, in which the newly and but partially united parts were torn asunder during the operation of a small dose of castor oil, which was imprudently given too soon.—EDITORS.

by the careful use of stimulant applications to encourage granulation. The lateral incisions require no particular attention, as they are covered by the poultices in the early period of the treatment, and may be dressed with charpie afterwards till they heal up; which commonly happens in fourteen days.

Dr. D. describes minutely a case in which this plan was completely successful. In eight days every part adhered firmly, except a small fissure in the rectum, which was also filled up by granulation before the end of the fourth week. The patient, a servant, who had been reduced to a state of great misery and helplessness in consequence of the unceasing involuntary discharge of flatus and feces, was thus restored within a month to a state of perfect health.—*Edinburgh Med. Journal.*

Extirpation of a portion of the Rectum.—In two cases M. LISFRANC has removed three inches of the lower part of the rectum. The patients have done well.—*Arch. G n rules.*

Extraction of Cataract by means of an Incision through the upper part of the Cornea.—According to GRAEFE, this method offers numerous advantages over those more usually adopted. The consequences of the wound are less severe, and the sight is more perfectly relieved, because the lower part of the cornea remains untouched, and preserves its natural clearness and convexity. In eighteen persons operated upon by the superior section, seventeen recovered their vision. In one only the cornea on one side became opaque, and this in consequence of a gouty inflammation which frequently returned.—*Bull. des Sciences Med.*

MATERIA MEDICA.

Variolaria Amera as a Substitute for Quinquina.—According to M. CASSEBIER, this species of lichen, which grows in abundance on the bark of the beech tree in mountainous forests, possesses a bitter principle similar to that of the quinquina. It results from the experiments tried by the author upon this plant, that it has the same febrifuge properties as the Peruvian bark.—*Magazin f r Pharm.*

MISCELLANEOUS.

Case of Poisoning with Belladonna.—A man,  t. forty-six, swallowed, by mistake, forty-four grains of the powder of belladonna: an hour afterwards, he was attacked with violent headach, especially over the orbits; the eyes became of a red colour, which quickly extended over the face, and lastly over the body, so that, within a few minutes, the whole skin exhibited an intense uniform redness, such as is observed in scarlet fever; at the same time the patient felt violent pain and heat in the throat, and along the  sophagus; and, on examination, the fauces were found strongly inflamed. These symptoms were accompanied by a very painful irritation of the urinary passages, especially of the neck of the bladder, with a constant but fruitless desire of making water. Copious bleeding, emollient clysters, fomentations on the belly, and twenty-five leeches to the hypogastrium, relieved the patient in some degree, and within twenty-four hours he was perfectly recovered.—*Nouv. Bibl. M d.*

Remarks on the Worari and Sirvatan. By Mr. HANCOCK. (Quarterly Journal of Science.)

Centuries have now elapsed since this dreaded weapon, which takes away life like a magic wand, without causing the slightest pang, became known to Europeans, in its effects at least. It is strange, therefore, that the subject should still remain involved in such profound mystery with regard to the poison, the mavacuri plant, which affords it, and that instrument, the sirvatan or blowpipe, through which it is propelled upon the victim.

The question, what plant affords the worari poison, involves, I presume, one of the most interesting inquiries in the whole department of natural history at the present day, and deserves from us a particular and attentive investigation.

Having examined the Mandavacs, Francisco, and Domingo, two intelligent Indians, who were born and bred on the spot, of the tribe most famed for producing the most active worari, and who lived in the vicinity of the mountains which produce both the deadly poison and the instrument of its conveyance, I have received from them separately a most correct and satisfactory account of this affair.

These Indians stated that, both for the mavacuri and sarsa, they go up the Siapo and contiguous streams, or about the mountains of Unturan and of Achivucary, as observed by Humboldt.*

They could give, however, no information respecting the flowers; but they know the plant well, and call it mavacuri; and they state that it is of the gourd kind, or one of the cucurbitacea, of the size of a large orange, round, and having a hard shell or pericarp, which is used at times to contain the poison.

The mahwy, they say, is the plant of which they make the blowpipe for projecting the arrow.

This plant, according to their representation, has large roundish leaves, is jointed, and has slight partitions, like those of the trumpet-tree, which they punch and clear away with long sticks of hard wood, fitted for the purpose. On further conversation with Domingo, it appears to be a species of palm; as, in respect to the texture, leaf, and seed, he compares the different parts to the eta and camawari.

On showing him the small pigmy palm growing on the sands of Essequibo, he said it was the mahwy, exactly in respect to the stem, but not the leaf, as that is bifid; and that it was similarly jointed.

The lining tube is of the same material, a junior or smaller plant of the same kind.

In regard to the manufacture of the poison, Domingo and Francisco say that they in general add nothing, though some, to thicken it, add the bark. They merely peel or scrape off the bark, and bruise it well in a mortar. The mass is then put into a funnel, or cartocho, made with wild plantain leaves, and having a little cotton at the bottom to strain it; plenty of cold water is poured over it; and they proceed in the same manner as in drawing the lixivium of ashes. This infusion is put into an earthen pot, (that which is here called a buckpot,) and boiled down to a proper consistence.

This was related circumstantially by Domingo and Francisco, separately.

* They persist that there is no sarsa in Casiquiari nor in the Rio Negro.

They had no idea of the addition of other substances, (ants, &c.) serving, in reality, only to dilute and render the poison less active, as prescribed by the Indians living near our settlement. All of which are but inventions, like those of the charlatans of Europe, to throw mystery over the affair, and enhance the value of the art. It is very surprising that men of good sense, like Mr. Waterton and Mr. Hildhouse, who, as I should suppose, have had opportunities of better information, should have the credulity to notice or respect such fictions.

The following extract from a letter of Mr. J. Forsyth will throw further light on the subject:

"I received your letter of the 5th ult., requesting a specimen of the warm vine. I am sorry it is not at present in flower, but I send you a small branch of it, and two other vines, called *curatally* and *comatopy*, which the Indians use as auxiliaries to strengthen the former. You will also receive two small vials of the warm vine, which will grow if immediately planted. It will require a great quantity of sand mixed with the earth it is planted in, as it is found growing on sand hills.

"The mode of preparing the powder is as follows: The inner bark or rind of the vine, for it is the rind only that is used, is scraped off into some vessel. The water-bail root undergoes the same process, but it is the vine root of the *comatopy* that is used. To these, mixed together and well haired down with some water, the Indians add some pepper, and further beat the whole mass in a black setup.

"The account of the process I have had from the Indians, but they are so long-winded in these talks, &c. and make the process so very prolix, I shall therefore leave it to my power. I hope, however, to give you a more accurate description of the process."

I said a thing does it really exist in nature as a direct sedative, in the strictest sense of the term. I should imagine it to be the extraordinary vegetable extract. Its operation on the animal frame is most mysterious. It extinguishes the vital spark without a pang or a struggle, if prepared without any other substance being added, for the most efficient poison is prepared from the warm vine alone. The operation and effect it produces are extremely analogous to those which arise from excessive bleeding; the animal power is exhausted, sinking from exhaustion in the most silent manner.

On the 17th ult., amongst the tribes the most celebrated for the use of the warm vine, I was told that all our sugar were contaminated by the most poisonous of the natives. The same was stated to me by a Canadian, upon the 20th ult. but afterwards I remember well, it was said to have been discovered by some experiments made in chemistry.

I am nevertheless inclined to think that some of the tribes do poison their arrows in the warm vine. I was assured by the Portuguese, that the Indians of the Rio Negro are in the habit of shooting arrows and darts, &c. with the warm vine, and afterwards resins, and incorporating them in fat to use.

This would be an interesting subject for a traveller to investigate. Could such an analysis be made as to render the matter inconceivable, I am a good deal of the opinion that it would not be so impossible as a more mysterious medication upon the human system, as it relates to the constitution, and in diseases, &c. &c. of the human system.

Does it kill by the privation of oxygen, the *pabulum* of the blood, and supporter of vitality? If this were the *modus operandi* by which it subverts the living powers, its effects might possibly be restrained by inhaling the oxygenous gas, or by cautiously throwing oxygen into the veins.

Be this as it may, it is probable that the same principle belongs to very different plants. If so, an important discovery remains to be made, that of ascertaining the proximate principle which, acting on the nervous and vascular systems, proves so subversive of animal life.

Iodine detected in the Blood.—M. BENNERSCHIEDT has detected iodine in the crassamentum of the blood of a person who had employed for a long time frictions with iodine ointment. He could not find any indication of its presence in the serum.

INTELLIGENCE.

MONTHLY REPORT OF DISEASES.

DURING the last month the metropolis has been remarkably free from any serious disease. The most frequent cases have been catarrhs and rheumatism, but they have not presented any features of sufficient importance to merit particular mention. From one case, in private practice, we are led to infer that even the external application of iodine, in the proportion of one drachm of the hydriodate of potash to one ounce of simple ointment, may be productive of serious constitutional disturbance. The ointment was applied twice a day to a suspicious tumor of the breast. During its application the patient complained of occasional loss of sight, sickness, nervous irritation, &c. These symptoms greatly subsided when the ointment was discontinued.

We lately mentioned that a patent had been granted to a surgeon of the name of Derbyshire for a remedy against sea-sickness. The mode of preparing it is as follows. (We give it in the untechnical dress in which it was presented to us.) Take of crude opium, two ounces; extract of henbane, two drachms; powdered mace, ten grains; hard mottled soap, two ounces; boil them in sixty ounces of soft water for half an hour, stirring them well; when cold, add one quart of spirits of wine at 60° above proof, and three drachms of spirit of ammonia. Rub a dessertspoonful of this embrocation well in and over the lower end of the breast bone, and under the left ribs, the latest time it may be convenient previous to embarkation, and again on board as soon as possible; and repeat it, if necessary.

Medical Societies.—The Medico-Chirurgical, the London Medical, and the Westminster Societies, have resumed their sittings for the present session. We shall notice any important discussion that occurs at either society.

We have kept open the press until the last moment, to admit the following Regulations, which are just published. We shall probably offer a few comments upon them in our next Number.

ROYAL COLLEGE OF SURGEONS IN LONDON.

Regulations respecting the Professional Education of Candidates for the Diploma.

I. Candidates will be required to bring proof

1. Of being twenty-two years of age.
2. Of having been engaged six years in the acquisition of professional knowledge.
3. Of having studied Anatomy, by attendance on lectures and demonstrations, and by dissections, during two anatomical seasons. (An anatomical season is understood to extend from October to April inclusive.)
4. Of having attended two courses of lectures on Surgery, each course comprising not less than sixty lectures.
5. Of having attended lectures on the practice of Physic, on Chemistry, and on Midwifery, during six months; and on Botany and Materia Medica during three months.
6. Of having attended, during twelve months, the surgical practice of a recognised hospital in London, Dublin, Edinburgh, Glasgow, or Aberdeen; or for six months in any one of such hospitals, and twelve months in any properly constituted provincial hospital, acknowledged by the Council as competent for the purposes of instruction.

It is earnestly recommended that candidates shall have studied Anatomy, by attendance on lectures and demonstrations, and by dissections, for one anatomical season prior to their attendance on the surgical practice of an hospital.

II. Members and licentiates in Surgery of any legally constituted College of Surgeons in the united kingdom; and graduates in Surgery of any University requiring residence to obtain degrees; will be admitted for examination on producing their diploma, licence, or degree.

N.B. All certificates recognised by the Royal Colleges of Dublin and Edinburgh, or by the Universities of Glasgow and Aberdeen, as to attendance on hospitals or lectures in these places respectively, will be received.

By order,

29th day of October, 1829.

EDMUND BELFOUR, Sec.

NEW REGULATIONS OF THE SOCIETY OF APOTHECARIES.

Regulations to be observed by Students whose attendance on Lectures commenced before January 1st, 1829.

The Court of Examiners chosen and appointed by the Master, Wardens, and Assistants of the Society of Apothecaries, of the city of London, in pursuance of a certain Act of Parliament, "for better regulating the practice of Apothecaries throughout England and Wales," passed in the fifty-fifth year of the reign of his Majesty King George the Third, apprise all persons whom it may concern:

That every candidate for a certificate to practise as an apothecary, will be required to possess a competent knowledge of the Latin language; and, in compliance with the fourteenth and fifteenth sections of the said Act, to produce testimonials of having served an apprenticeship of not less than five years to an apothecary, of having attained the full age of twenty-one years, and of good moral conduct.

Candidates will also be required to produce testimonials of attendance on lectures and medical practice, agreeably to regulations at different times published by the Court.

Those whose attendance on lectures commenced prior to the 1st of February, 1828, will be admitted to examination after an attendance on one course of lectures on Chemistry, one course of lectures on Materia Medica, two courses of lectures on Anatomy and Physiology, two courses of lectures on the Theory and Practice of Medicine, and six months' physician's practice at an hospital, or nine months at a dispensary.

Those who began to attend lectures subsequently to the 1st of February, 1828, and previously to the 1st of October in the same year, will only be admitted to examination after the following course of study: viz. an attendance on one course of lectures on Chemistry, one course of lectures on Materia Medica and Botany, two courses of lectures on Anatomy and Physiology, two courses of lectures on the Theory and Practice of Medicine, (to be attended subsequently to the lectures on chemistry and materia medica, and to one course at least of anatomy,) and six months', at least, physician's practice at an hospital, or nine months at a dispensary; such attendance to commence subsequently to the termination of the first course of lectures on the principles and practice of medicine.

Those whose attendance on lectures commenced on or after the 1st of October, 1828, and previously to the 1st of January, 1829, will be required to produce testimonials of having attended two courses of lectures on Chemistry, two courses of lectures on Materia Medica and Botany, two courses of lectures on Anatomy and Physiology, two courses of Anatomical Demonstrations, two courses of lectures on the Theory and Practice of Medicine, (to be attended subsequently to one course of lectures on chemistry, materia medica, and anatomy,) and six months, at least, the physician's practice at an hospital, containing not less than sixty beds, or nine months at a dispensary; such attendance to commence subsequently to the termination of the first course of lectures on the principles and practice of medicine.

Regulations to be observed by Students whose attendance on Lectures commenced since January 1st, 1829.

The Court of Examiners chosen and appointed by the Master, Wardens, and Assistants of the Society of Apothecaries, of the city of London, in pursuance of a certain Act of Parliament, "for better regulating the practice of Apothecaries throughout England and Wales," passed in the fifty-fifth year of the reign of his Majesty King George the Third, apprise all persons whom it may concern:

That every candidate for a certificate to practise as an apothecary, will be required to possess a competent knowledge of the Latin language, and, in compliance with the fourteenth and fifteenth sections of the said Act, to produce testimonials of having served an apprenticeship of not less than five years to an apothecary, of having attained the full age of twenty-one years, and of good moral conduct; and also testimonials of having attended two courses of lectures on Chemistry, two courses of lectures on Materia Medica, Therapeutics, and Botany, two courses of lectures on Anatomy and Physiology, two courses of Anatomical Demonstrations, two courses of lectures on the Theory and Practice of Medicine, (to be attended subsequently to one course

of lectures on chemistry, materia medica, and anatomy,) two courses of lectures on Midwifery and the Diseases of Women and Children, and nine months, at least, the physician's practice at an hospital, containing not less than sixty beds, or twelve months at a dispensary; such attendance to commence subsequently to the termination of the first course of lectures on the principles and practice of medicine.

Students are, moreover, earnestly recommended to attend Clinical Lectures, and diligently to avail themselves of instruction in Morbid Anatomy and Forensic Medicine.

The examination of the candidate will be as follows:

1. In translating grammatically parts of the *Pharmacopœia Londinensis*, and physicians' prescriptions; and, after the 1st of January, 1831, candidates will be required to translate portions of the following medical Latin authors: viz. *Celsus de Medicinâ*, or *Gregory Conspectus Medicinæ Theoreticæ*.

2. In Chemistry.

3. In Materia Medica and Therapeutics.

4. In Botany.

5. In Anatomy and Physiology.

6. In the Practice of Medicine.

N.B. Physicians' pupils, who intend to present themselves for examination, must appear personally at the beadle's office, in this Hall, and bring with them the tickets authorising their attendance on such practice, as the commencement thereof will be dated from the time of such personal appearance.

No testimonial of attendance on lectures on the principles and practice of medicine, delivered in London, or within seven miles thereof, will render a candidate eligible for examination, unless such lectures were given, and the testimonials signed by, a fellow, candidate, or licentiate, of the Royal College of Physicians of London.

Notice. Every person intending to qualify himself under these regulations, to practise as an apothecary, may obtain, at the beadle's office at this Hall, (where attendance is given every day, except Sunday, from nine until two o'clock,) a printed form of certificate of all the lectures candidates are required to attend, and also of the physician's practice. The Court requests the blanks may be filled up when signed by the respective lecturers and physicians whose lectures or practice the student has attended.

Students are enjoined to observe, that, in future, these certificates, so filled up, will be required from candidates for examination, and that no other form of testimonials of attendance on lectures and medical practice will be admitted, except such certificates as have heretofore been received, if the same were obtained prior to the 1st of February, 1828; or such as bear the seal of a university or college, and the signature of the officer attached to such university or college, whose duty it is to sign certificates of attendance on the lectures given therein.

Every person offering himself for examination must give notice in writing to the clerk of the Society, on or before the Monday previously to the day of examination; and must also, at the same time, deposit all the required testimonials at the office of the beadle.

The Court will meet in the Hall every Thursday, where candidates are required to attend at half-past four o'clock.

By order of the Court,

London; Sept. 1, 1829.

JOHN WATSON, Sec.

For information relative to these regulations, medical students are referred to Mr. Watson, who may be seen at his residence, 43, Berners street, between the hours of nine and ten o'clock every morning, (Sunday excepted;) and for information on all other subjects connected with the "Act for better regulating the Practice of Apothecaries," application is to be made to Mr. Edmund Bacot, clerk of the Society, who attends at the Hall every Tuesday and Thursday, from one to three o'clock.

It is expressly ordered by the Court of Examiners, that no gratuity be received by any officer from any person applying for information relative to the business of this Court.

MONTHLY LIST OF MEDICAL BOOKS.

[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]

An Estimate of the real Therapeutic Value of all the new Chemical and other Remedies introduced into Medicine within the last twenty years, derived from actual Practice; with Directions for preparing and employing those which are worthy the attention of the Medical Profession. By RICHARD REECE, M.D.

Anatomy of the Human Bones, Joints, and Ligaments; arranged in eight Tables. For the use of Students.—Burgess and Hill.

These tables, which are very moderate in price, are particularly well adapted as references for the student to refresh and strengthen his memory, after he has perused more elaborate anatomical works.

The Art of Prolonging Human Life; in which the subject is fully considered, both philosophically and practically. By C. W. HUFELAND, M.D. first Physician to the King of Prussia, &c. A new Edition; with Notes, by an English Physician.—8vo. pp. 328. Simpkin and Marshall, London, 1829.

The talent of Hufeland is too well known to require our formal praise.

From the perusal of this long-celebrated work, the medical and general student will derive instruction and amusement. It has already passed through several editions, and the present is improved by many interesting notes from an intelligent, although anonymous, editor.

A Manual of General Anatomy; or, a concise Description of the primitive Tissues and Systems which compose the Organs in Man. By A. L. J. BAYLE, D.M.P. &c. and H. HOLLARD, D.M.P. &c. Translated from the French, by HENRY STORER.—12mo. pp. 318. Wilson, London, 1829.

In this country we abound with works of all classes and all degrees of merit on descriptive anatomy, but our press has been much less fertile in the production of treatises on "General Anatomy." Until the appearance of this "Manual," indeed, we had no work in so condensed a form upon this important branch of medical science. Mr. Storer has shown his judgment in the selection of an original, and has executed the duties of a translator with fidelity and ability. This little work will be consulted with much advantage by every anatomical student.

A New Method of treating Burrs and Scalds. By MICHAEL WARD, M.D. S.R.C.C.L.—Manchester.

A Treatise on Neuralgic Diseases dependent upon Irritation of the Spinal Marrow and Ganglia of the Sympathetic Nerve. By THOMAS P. TRALE, Surgeon; Senior Surgeon to the Leeds Public Dispensary, &c.—8vo. pp. 120. Highley, London, 1829.

Elements of General Anatomy, containing an Outline of the Organization of the Human Body. By R. D. GRAINGER, Lecturer on Anatomy and Physiology.—8vo. pp. 526. Highley, London, 1829.

A Letter to Lord Robert Seymour, with a Report of the Number of Lunatics and Idiots in England and Wales. By Sir ANDREW HALLIDAY, K.H. and M.D.—Underwood, 1829.

An interesting document to those engaged in making statistic researches into the number and condition of the insane in England and Wales.

Notions of the Nature of Fever and of Nervous Action. By W. FORRESTER Bow, M.D. &c.—3vo. pp. 100. Longman, London, 1829.

METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

September	Moon	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	12 m.	3 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
20			53	58	46	29.75	29.68	62	62	NE	SW	Fine	Fine	Fine
21		.28	50	60	48	.63	.71	60	59	W	W	Cloudy	Fine	
22			52	61	52	.74	.69	59	59	WSW	SW			
23			59	60	53	.70	.74	59	57	SW	SW	Foggy	Fine	
24			55	60	50	.82	.88	57	55	WNW	NE	Cloudy	Fine	
25			54	58	47	.99	30.04	59	59	NNE	E	Fine	Cloudy	
26			60	60	49	30.06	30.00	59	56	WSW	SW	Foggy	Fine	Cloudy
27			56	62	47	29.90	29.68	58	58	WSW	SSW	Show'ry	Fine	Fine
28			54	56	46	.75	.79	60	56	WNW	NNW	Fine		
29			49	58	43	.84	.96	54	54	NW	NNW	Foggy		
30			52	59	47	30.07	30.11	56	56	NNE	NNE			
Oct. 1			54	60	52	.11	.08	58	62	ENE	ENE	Fine		
2			56	58	55	29.90	29.83	65	67	ENE	ENE	Cloudy	Rain	Foggy
3		.17	57	58	50	.71	.61	70	70	SW	W	Show'ry	Rain	Fine
4			54	58	47	.68	.54	67	67	N	W	Fine	Fine	Cloudy
5			55	57	45	.46	.46	65	68	W	W	Rain	Fine	Fine
6		.50	51	53	41	.48	.59	68	57	WNW	NW	Fine		
7			42	41	34	.40	.36	58	57	WNW	N	Foggy	So. & Ra.	Fine
8		.63	40	43	35	.68	.91	57	56	NNW	N	Fine	Cloudy	Fine
9			46	49	44	30.05	30.18	56	57	NNW	WNW	Foggy	Fine	Foggy
10			49	56	45	.28	.26	55	57	NW	W	Foggy	Fine	Cloudy
11			51	58	53	.14	.03	59	60	SW	W	Fine		Fine
12			57	57	52	.01	.01	60	61	NW	NW	Cloudy	Fine	Cloudy
13			55	58	42	19.87	29.65	61	60	WSW	WSW		Cloudy	
14			51	54	38	.77	.72	59	58	NW	N	Show'ry		Fine
15		.04	45	51	42	30.06	30.16	58	56	N	N	Fine		
16			47	55	48	29.92	29.70	56	55	SW	WSW			
17			55	56	50	.89	30.00	64	59	W	WSW			
18			56	60	53	30.00	29.97	61	61	WSW	WSW			
19			59	61	56	29.94	.90	64	65	WSW	SW		Cloudy	Cloudy

The quantity of Rain fallen in the month of September, was 2 inches and 58-100ths.

NOTICES.

Communications have been received from Mr. BURNETT and Mr. LAWTON.

If "A Friend to Humanity" will forward his name to the Editors, and consent to its being attached to his communication, they will publish it in the next Number. It is true the paper referred to is professedly a practical discussion, but it is also very obviously a covert attack upon the conduct of an individual, as the medical officer of a public institution; and therefore cannot be admitted anonymously.

"CHIRURGUS" requests us to inform him whether he can "safely apply the term original to his speculation." We answer, he cannot.

Boylan Lib

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For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush*.

ORIGINAL PAPERS, AND CASES,
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER
AUTHENTIC SOURCES.

FUNCTIONAL DISORDERS OF THE SPINAL CORD.

Observations on Functional Disorders of the Spinal Cord, and their Connexion with Hysterical, Nervous, and other Diseases. Illustrated by Cases, selected chiefly from the Reports of the Pallas, Kenry, and Currah Dispensaries. By WM. GRIFFIN, M.D. and D. GRIFFIN, M.R.C.S., Limerick.

ALTHOUGH the attention of the medical profession has been, within these few years, so very much directed to affections of the spinal cord, it would seem, on inquiry, that little really new has been added to our previous acquisitions on the subject. Referring to many valuable opinions of German and French writers, long fallen into undeserved neglect, and comparing them with inferences now almost obtruding themselves on general notice, we shall be apt to imagine there has been, in this country at least, an unaccountable carelessness of observation; or be led to very unsatisfactory reflections on the impenetrable obscurity in which all disorders of the nervous system would seem to be involved. Perhaps it is because of the little fruit gathered by long toil, that some are inclined to consider the labour misapplied; and while they are satisfied to treat, under the appellation of nervous, hysterical, &c., whole trains of complaints which have little in common but that of their being ill understood, venture to censure the persevering efforts of those who, if they have been as unsuccessful, have at least the merit of not being so hopeless, in the inquiry. It is gratifying to observe that the rapid progress which

modern physiology is making, daily exposes the futility of opinions which measure the value of application only by its ill success in particular instances, and offers new proof that the worth of a discovery in obscure sciences is proportioned almost as much to the expenditure of time and thought as to the strength of the intellect which has made it.

But, exclusive of these considerations, and even of the temptation to new exertion in the late extraordinary discoveries elicited by the labours of Magendie, Le Gallois, Wilson Philip, and Charles Bell, the subject of spinal disease holds out a most imperative inducement, in the perplexed state of our diagnosis, through a vast range of complaints, and in the acknowledged mistakes which we every day see made in the practice of well-informed members of the profession. We need only refer to the periodicals of the day, which teem with cases of, as they are called, strange, anomalous, proteiform maladies, the mocking birds of nosology, or imitators of every known disease, accompanied with cautions on the danger of confounding them with their prototypes: or to the admitted difficulty in the treatises on nervous and hysteric diseases, by the most distinguished practitioners of the day, of offering any marked symptoms by which they could always be clearly distinguished.* Indeed, the actual existence of these

* Dr. HAMILTON, in his *Treatise on Diseases of Women and Children*, says, "On some occasions, hysterics put on the appearance of several disorders, such as melancholy, epilepsy, palsy, inflammation of the lungs or bowels, gravel, &c. It requires in these cases not only the *most unremitting attention*, but also the *utmost practical discernment*, to distinguish the true disease from that which it resembles.

"When the symptoms are not uniformly and regularly those which occur in the ordinary cases of the disease imitated; when there suddenly seems great danger, without those previous changes in the progress of the complaint which are usually met with; when there is either a natural state of the pulse with alarming symptoms, or a very frequent irregular pulse without any affection of the breathing or shrinking of the features, there is reason to suspect hysterics as the true disorder. *Cases from time to time occur where it is impossible to ascertain the real nature of the affection, till towards its termination.* The fact, too, that in every acute disease of women which requires copious evacuations, or which debilitates the system, hysterics are apt to occur in the progress to recovery, adds much to the difficulty of judging precisely in any given case."

Dr. GREGORY, in his *Practice of Physic*, after mentioning the frequent resemblance and connexion between hysteria and epilepsy, and the difficulty of distinguishing one from the other, says, "But it is not only from epilepsy that hysteria is difficultly distinguished. There is hardly a disease in the whole nosology of which it has not imitated the symptoms, and that with surprising accuracy. I have seen hysteria accompanied by constant vomiting; by a complete ischuria renalis; by the most obstinate colic; by all the symptoms of genuine asthma. Authors have described in like manner an hysterical jaundice, an hysterical mania, an hysterical diabetes. These circumstances require to be borne in mind with reference to prognosis."

singular and apparently functional disorders, which assume the symptoms of all others, and continue unrelieved by the remedies applicable to any; which look like inflammations, and are rendered worse by bloodletting; or simulate intense spasmodic attacks, and bid defiance to opiates; and which yet, after resisting all possible treatment, eventually, and perhaps suddenly, disappear of themselves, would, in a merely therapeutic view, appear strange and deserving of inquiry.

In the classification of diseases, the great division into those of the vascular and nervous systems, the pyrexia and neuroses of Cullen, was at once obvious to the nosologist; and, again, the distinction of nervous complaints, as they developed themselves in any one tissue or organ, or another, and invariably presented the same characters, seemed easy of attainment; but there came to be a great difficulty about that vast number of the latter which are so variable in their seat and appearance, and so untraceable in their origin, as apparently to preclude all proper arrangement. They were necessarily thrown together as a sort of anomalous class, like the Cryptogamia in botany, awaiting the result of future discovery for more appropriate distribution. But, surely, if it had been considered that all nervous disorders must eventually resolve themselves into affections of the three great centres of nervous influence, the cerebral, the spinal, and ganglionic systems, much of this perplexity might have been avoided. We have, it may be presumed, now made sufficient progress in the pathology and diagnosis of diseases of the brain to estimate with some accuracy the characters which indicate their origin, and may generally, even in those that most nearly resemble spinal or other affections, draw correct inferences from the history of the case and the intensity of particular symptoms. Of those of which there is much doubt, or which evidently do not belong to the brain, we can observe how far they correspond with the usual or known symptoms of spinal disorder, organic or functional; and, if there be some found bearing no analogy to either the one or the other, the deduction seems clear that they depend on some disordered or diseased state of the ganglionic system. However hypothetical a division of this kind may appear in diseases of the nervous tissues, which are so delusive and difficult of arrangement, and after death present so few appearances to direct the reasonings of the pathologist; however frequently erroneous its application may prove, it must be true in principle, and, when once held in view, cannot but give more of

method and object to our investigations, and greater rationality to our treatment.

The cerebral, the spinal, and ganglionic systems are all, independently of one another, though perhaps unequally, subject to inflammation, to irritation, and the influence of sedative powers. The spinal cord itself, the experiments of Le Gallois have shown, is composed of portions independent of one another in their powers and functions, being centres from which the nervous actions of corresponding parts of the body emanate, and to which they tend. At least four of the senses derive their faculties from its superior portion,* which can receive their usual impressions and originate actions independent of the brain or cerebellum. Its anterior part is the source of all voluntary motion, its posterior of all common sensation. Between both is the column from which arises Mr. Bell's respiratory system of nerves, the most susceptible and independent of all, and yet we find a perpetual disposition to attribute all nervous diseases to affections of the brain, as if it were the sole sentient organ and seat of universal sympathy.

That a vast proportion of those diseases may be attributed to irritation at the origin of the spinal nerves, without any cerebral affection, was asserted by Ludwig. He even explained the phenomena of many hysterical affections by the connexion of these nerves with the par vagum. Other eminent men have held the same opinions. Mr. Burns, of Glasgow, in his work on Midwifery, has given a very excellent and interesting chapter on spinal irritation, evidently the result of long experience and acute observation, in which he asserts that its visible consequences are so various it is impossible to classify them. In a late Number of the Glasgow Medical Journal, Dr. Brown has published an essay pointing out the connexion between it and many painful affections, usually treated as rheumatic or disorders of the viscera. He has cited some valuable cases, and offered much ingenious reasoning on the causes to which they may in general be probably attributed. How very little these opinions have as yet influenced the science, any one acquainted with modern medical literature or medical practice must be aware.

It is surprising when a subject is once universally admitted to be obscure and perplexing, with what little scrutiny or hesitation we receive any name or phrase that relieves us from the impression of total ignorance. To this alone

* The spinal cord is always mentioned as including the medulla oblongata.

can be attributed the ready acceptance of the words imitation, protean, anomalous, &c., as applied to hysteric and nervous diseases, as if there existed in the animal economy some evil influence, without home, or habit, or relation, capable of increasing or interrupting any of its functions, or assuming any of its morbid actions, yet free and independent of all organic change. The convenience of referring to such influence all the morbid phenomena which are difficult of explanation, bears a just proportion to its mysterious nature; but surely we might as well speak of labour imitating cramp, as of hysteria imitating croup, the one a spasmodic affection of the gastrocnemii muscles, occasioned by pressure or irritation of the sacral nerves, the other a spasmodic affection of the muscles of the larynx, occasioned by irritation of the cervical.*

It is not to be inferred from these remarks that any thing approaching certainty as to the nature of those numerous diseases can be yet attained. We only contend against that catching, unconscious indolence which leads us to prefer vague modes of expression to active inquiry. Accurate observation and industrious research are never wholly useless, even when they fail in establishing the inductions sought for; and this conviction, perhaps as much as the hope of unravelling those intricate affections, induced a perseverance in investigations which the present paper will show were not without considerable trouble. Its object is chiefly to illustrate their apparent connexion with a morbid state of the spine, and to point out the immense proportion they bear among the complaints of young females, beyond what has been generally imagined. Remarkable instances will be given of the inutility of all symptomatic treatment in some of them, and the successful, and sometimes almost magical, influence of the remedial means, when once directed to the spine. The successful cases were not, it must be admitted, of the most complicate class, but they were such as, when not understood, always prove sufficiently obstinate to weary the patient and embarrass the practitioner. Of the more perplexing ones, where general irritation of the spinal column prevailed, it is to be regretted the practice of two dispensaries, at which 4000 patients were annually attended, afforded a more ample opportunity of studying the history and character,

* If we were to inquire, in a case of labour, what is this spasmodic and painful affection of the gastrocnemii? and it was answered, It is not idiopathic cramp, but an affection exactly resembling it, dependent on the parturient state, one, in fact, of the many anomalous complaints which labour is found to imitate, would it be conceived in the slightest degree satisfactory?

than of discovering much that was new in the management. If, however, to become acquainted with all the possible relations of a disease, and to approach nearer to its probable origin, be any advance towards an improved plan of cure, even what has been done may not be considered unimportant.

Perhaps the extraordinary case which first arrested the notice of the writers of this article, and directed their attention especially to disorders of the nervous system, may also prove its most interesting introduction to the reader.

I. A young lady, aged twenty-one, who had always before enjoyed good health, received a slight blow on the chest from her mother, during her convulsive struggles while dying of apoplexy. She spit up a little blood at the time, and felt pain for some days; after which it suddenly removed to the abdomen, affecting the left side, about the situation of the descending colon, with frequent hard pulse and tenderness, and the most incessant vomiting. The pain was abated by bleeding, blistering, and aperients; but nothing could allay the vomiting, which was brought on by the smallest quantity of any thing, solid or liquid, taken into the stomach. This came to be attended with flitting pains in the head, with throbbing of the temples, and intolerance of light, attributed to the straining; the continuance of which made it difficult to move the bowels. Even when medicine did operate, it gave no relief.

She remained many days in this state, suffering much from want of rest and the distressing retching; after which she was attacked with frequent oppression, occurring at intervals through the day, and usually terminating in fits of insensibility. In these she usually lay for ten or fifteen minutes, with her hands fast clenched, or sometimes shutting and opening them alternately with great rapidity. There was considerable rigidity of the tendons of the wrist, while the fit lasted; and the first symptom of amendment was always a gradual relaxation and opening of the fingers, when she fetched a long deep sigh, and recovered.

These oppressions proved as intractable as the vomiting, and were very distressing. Repeated blistering, ether, assafoetida, opium, and other antispasmodics, were had recourse to without relief, except of the most temporary kind. At the end of three weeks, however, the more severe symptoms of the complaint, without any very obvious cause, and after resisting every kind of treatment, began gradually to decline: the oppressions, throbbing at the

temples, fits of insensibility and vomiting, manifestly abated; and the digestive organs, the state of which had never been lost sight of, improved rapidly under mild aperients and bitters. In short, she soon after recovered a sufficient degree of health to permit her going to a party, and even joining in the amusements.

This reprieve was but of very short continuance. A return of the oppression brought with it cough, pain in the chest and left side; the former slowly disappearing as the latter symptoms advanced and became more formidable. The cough was loud, dry, and convulsive, and became at last so incessant that she had no intermission of the fits by day or by night. The convulsive expirations followed one another with such rapidity, that they can only conceive the suffering who have witnessed a severe chincough, and imagine the fits following one another without interval. To heighten the distress, it increased considerably the pain in the chest and sides, and the respiratory muscles became so sore and tender, from the eternal convulsive action, that she could scarcely bear to have a finger touch them. After much time had passed in vain attempts to remove or alleviate it, she became affected with swelling and pain in the anterior part of the right lobe of the liver, which increased rapidly, and formed a round, circumscribed, shining tumor, bearing all the appearance of an abscess. This was very painful, and the torture produced by the constant coughing was extreme.

A course of blue pill was now prescribed at a consultation; the symptoms, and especially the cough, being attributed to an affection of liver, which was supposed to have existed for a long time, although only now developing itself. Copious ptyalism followed, and, to the great gratification of every one, the cough was now first relieved, and in a week or two ceased altogether.

The young lady, however, remained in a very weak, complaining state, troubled much with occasional pain in the head and intolerance of light, and eventually, as the soreness of the gums diminished, the terrific cough again evinced a disposition to return. It was not considered advisable to persevere in the mercurial pill, which seemed to be the only preventive likely to be employed with success, as she had suffered much from the salivation, and was greatly debilitated. The consequence was a renewal of her sufferings, if possible, to a more intense degree than before. New symptoms week after week supervened, or alternated with the old, and were only more distressing on

account of their strangeness and suddenness of attack: at one time the oppressions; at another, headach with fits of insensibility; at a third, the old pains traversing different parts of the colon and ileum with their former violence. She was attacked, too, with severe pain and tenderness in the hypogastric region, followed by retention of urine, obliging the introduction of the catheter. But little was drawn off, however, as the secretion was almost entirely suppressed, and did not return for three or four days, when the soreness, &c. in the hypogastric region subsided. During all this time the pain and tenderness of chest, and the dry, loud cough, were never for a moment absent.

The case was now looked upon as quite hopeless: the distress occasioned by such complicated disorder destroyed all rest and appetite, and induced extreme emaciation; solid food could no longer be borne, but was either instantly rejected, or excited violent spasmodic pain in the stomach, and sometimes the oppressions. The slightest motion (she was now continually confined to bed,) brought on similar paroxysms, after which she usually became almost insensible, with suppressed convulsive efforts at coughing, her voice gone, and her pulse rapid. This state generally lasted for some hours, sometimes much longer; and, as strength gradually returned, the hacking eternal cough resumed its attack.

It would be tedious to enter into a minute history of the symptoms or treatment during the succeeding two or three years. The disease successively assumed the appearance of organic disease of the lungs, heart, and abdominal viscera, and, though the sufferings of the young lady may be supposed to have diminished little, she continued to live, and apparently to maintain the little strength the earlier attacks had left to her. She lived almost entirely on milk, and of this not more than half a pint was taken in the day. A small portion of ripe fruit, a strawberry or cherry, was taken occasionally in the summer-time, and sometimes a little jelly in the winter. Little medical treatment was made use of, except some attention on the part of her friends to her general health, and occasional attempts at relieving particular symptoms by opiates, antispasmodics, or blisters.

On an accidental visit of her medical attendant at the close of the year 1828, the connexion between several of the pains of which she complained and the distribution of the spinal nerves appeared so striking, that an examination of the spine was made. There was no deformity, unevenness,

or prominence of the vertebræ, but extreme tenderness of the whole column. Pressure on any of the spinous processes excited instant convulsive fits of coughing, and pain at the corresponding point anteriorly, or oppression. The slightest curvature in any direction was intensely painful; attempting to turn in the bed during the examination (which, however, she could never either accomplish or permit,) occasioned a sensation as if her back was breaking; raising the head from the pillow, and bending the neck forward, brought on a burning pain at the middle dorsal vertebræ, which shot down to the extremity of the spine, and thence to the limbs, knees, and toes, followed by a sort of general cramp. It seemed extraordinary how little the patient directed attention to the back in so intense a case of spinal disease: she frequently complained of pain there; but, as it was never constant like those felt at the extremities of the nerves, and was only excited by pressure or motion of the spine, and was then generally accompanied by, or occasioned, extreme sickness of stomach, retching, and eventual insensibility, it claimed little notice in the train of symptoms.

The complaint now clearly developed itself. The various affections to which she had been so long a sufferer were obviously attributable to some disease of the medullary column. The distressing headach, rushing of blood to the head, ringing in the ears, throbbing at the temples, and fits of insensibility; the sensation of acute pain, or of the pricking of pins and needles, shooting forward through the face and jaws, in the course of the branches of the fifth pair of nerves, or lower down in front of the larynx; the difficulty of swallowing; the shrill croupy breathing; the pain and cramp of the stomach or chest; the oppression, and the dry, loud, convulsive cough, were all readily referred to disease or irritation of the cervical portion of the spinal cord. The extreme soreness and pain of chest and sides; the pain at the upper part of the sternum, shooting down the arms to the fingers, and producing distressing tingling; the occasional numbness of the arms; the symptoms of cardiac and pulmonic disease, appeared to depend upon some affection of the upper dorsal and lower cervical: and the abdominal pain; tendinous cramp; colic, and sometimes seeming inflammatory attacks; and those of dysuria, or total suppression of urine, or painful affections of the limbs, were at once traced to some altered state of the lumbar and lower dorsal portion. All the complicated, and it would appear whimsical, attacks of this strange malady

seemed now simple and necessary results, and their alternations with one another merely indicated the shifting of the diseased action to new points of the vertebral chain.

As issues, or blisters to the spine, were almost the only untried remedies which the state of the patient suggested, and these seemed wholly inadmissible, from the difficulty and pain with which the slightest motion of the frame was attended; as it appeared also possible that sloughing or gangrene might take place in so emaciated a person, the case was again left to the efforts of nature; care, however, being taken of the state of the bowels; and narcotics, &c. resorted to, as before, when in violent pain. The disease was, nevertheless, slowly progressive, and as it advanced declared its true seat to the most careless observer: the whole spinal column was, if possible, more acutely tender; the slightest pressure or motion brought on pain; cramps, or fits of retching; drawing the sheet or arranging the bed, or the sudden falling of a piece of furniture, excited an instant paroxysm, commencing with cramp in the chest; sense of suffocation in the throat, with low crowing inspiration, not ringing and stridulous as in croup; and terminating in extreme debility, with total loss of power, and tremulous convulsive motion of almost every muscle in the frame. The affection of head and pain in the throat became more tormenting; there was constant distressing pain of stomach, with rawness, soreness, and sometimes a burning feel, extending up the trachea to the larynx; there was variable pain of the chest and left side, and a sensation as of a sore cord or band stretched across from the superior bone of the sternum to a point corresponding with the anterior part of the fifth rib on the left side. This never permitted her stretching back (making the chest prominent), and she had often apprehensions that it would rend or snap in the violent fits of coughing. She had also a frequent feeling as if the spine was seized internally, and drawn to the sternum or stomach: when to the former, the sensation was succeeded by convulsive spasms, with oppression; when to the latter, by violent cramp extending upwards to the sternum, and shooting down to the limbs, knees, and toes. At times, when the cough was extremely violent, and shook the frame much, or when the patient was lifted on a sheet to have her bed arranged, she felt as if the articulating surfaces of the spinal bones were inflamed, sore, and glided or rubbed upon one another in the loose ligaments. This feeling was so excruciating, that, whenever she was about to be removed on a sheet, she was accustomed to throw all the extensor

spinal muscles into action, and, by a violent effort, bring the whole spine into a state of rigid extension, to preclude the possibility of the slightest motion. An approach to syncope always followed the exertion, in which she lay on the bed for days, unable to speak or swallow, or even move, yet conscious of every thing passing about her. Although so seemingly still and breathless that it might have been imagined she lay in an utter state of relaxation and exhaustion on these occasions, if a hand was laid on hers, it was found in rigid spastic action, and, instead of reposing quietly on the chest as it appeared, pressed firmly and almost convulsively against it, as one does to prevent the elevation of the ribs in painful breathing. The breathing, too, although so apparently easy as to be almost imperceptible, was found, on close observation, difficult and suffocating; there was a subdued working of the muscles of the throat, and inspiration was either wholly suspended at times or occurred in short indistinguishable catches, until a deep sigh brought with it general relaxation and relief. It was usually a full week before she recovered from the ill effects of these attempts to move her from the bed; but even turning her head on the pillow for a few minutes brought on such convulsive coughing, and subsequent sinking, that she could not utter an audible whisper, and would lie for hours in a state of the most extreme exhaustion.

As it seemed that her sufferings could now, at all events, admit of little increase, an issue was inserted at each side of the second cervical vertebra; by which the pain of the forehead, face, and scalp was considerably relieved; all the parts, as she said herself, above the issue were better, the other symptoms were little altered.

Towards the close of February 1829, while drinking in the evening, she felt a sensation as if something gave way in her chest, as if the band from the upper part of the sternum, before spoken of, had snapt. She was instantly attacked with oppression, a sense of burning and pain in the throat and chest, croupy breathing, total loss of speech, and blindness of the left eye, with numbness and paralysis of the left arm; she had also a sense of numbness extending from the point in the chest where she felt the band snap, across to the shoulder, and down the left arm to the fingers; some difficulty of swallowing, and violent pain, straining, or retching, when the smallest quantity of food or drink reached the stomach. There was some swelling and excessive tenderness of stomach, with violent cramp at intervals, which extended down to the limbs and knees. The secretion

of urine was suppressed, no more than half an ounce having passed in twenty-four hours, and that thick and black. There was no tenderness or fulness in the pubic region.

After the lapse of some days, during which croton oil and diuretics had been freely used, the eye partly recovered its power, and the action of the kidneys was restored. Blisters to the throat and neck were of little advantage; but, on applying one to the occiput, some degree of voice was manifestly recovered, and the power of swallowing perfectly; the fingers of the paralysed arm also seemed to acquire a little motion.* In July, a very decided improvement had taken place. The arm had attained much strength; and she was able to speak in a low whisper, though with pain and difficulty. It should be observed, that the power of articulating was never lost, so that, even while partly dumb, she could often make herself understood by a distinct, voiceless articulation of the words.

We have at length brought the history of this melancholy complaint down to the present moment, and venture to express a hope we shall hereafter have to record its favorable termination. After all the young lady's sufferings, there is no evident sign of any irremediable mischief having occurred; and, however small the quantity of nutriment she is able to take, the expenditure of power has become so accurately proportioned to it, that we may suppose little need be apprehended from debility. In conclusion, perhaps, there is yet one circumstance worth mentioning: the singular change which, in the course of the complaint, took place in those fits of insensibility, or powerlessness, which were said to approach a state of syncope. In the commencement they very closely resembled slight tetanic paroxysms, during which there was a degree of consciousness to all that was passing around her; they then succeeded the rushing of blood to the head, &c., and she lay staring with a wild glassy look on all about, without power of speech or motion; but latterly they came on like cataleptic trances, fixing her, like a waxen figure, in whatever position she chanced to lie, for ten or twenty minutes, or longer.

In a late visit to the patient, it was gratifying to observe the amendment. She now speaks perfectly well, is cheer-

* The paralytic attack seemed in the first instance to have affected the whole side; for, although she never complained of the left leg, it was observed, in those convulsive thrillings of the frame which succeeded paroxysms of the pain and oppression, to remain perfectly still. It continued, however, capable of the usual voluntary motions.

ful, and entertains hopes of recovery. She complains, however, that, instead of the tight sore band across the chest, (the snapping of which, though attended by such extraordinary symptoms, gave her great relief,) she now feels a sore tumor as if growing from the spine, and biting against the sternum in front every time she coughs. Can these sensations really have a connexion with any such affections as she conjectures? Was the snapping of the band the rupture of an adhesion, and why the paralysis? These are interesting questions. She mentions that, for days before the presumed lesion took place, she felt the band giving more and more with the fits of coughing; she felt it tearing, and, after the complete rupture, floating loose in the chest.

[To be continued.]

DISEASE OF THE HIP-JOINT.

Case of Strumous Suppuration of the Synovial Capsule of the Hip-joint, treated with Iodine. By WILLIAM JOHN THOMAS, M.R.C.S.

MASTER A. B., aged seven years, was brought to me on the 26th April, 1829, for advice respecting a tumor which had arisen in the groin, a week or two previously, and which had considerably enlarged since its first appearance. He was of a strongly-marked strumous diathesis: the skin was smooth and delicate, the complexion fair; the hair of a light colour, soft, and silky; the irides were blue, the upper lip was thick and projecting, and the cheeks of a peculiar rosy hue.

Upon examining the tumor, an obscure fluctuation was perceptible: suspecting that it might arise from a psoas abscess, I carefully examined the lumbar vertebræ, but could detect no preternatural sensibility. The hip-joint, however, was somewhat tender upon pressure, especially around the trochanter major, and there was some appearance of swelling over the glutei muscles. Aperient medicines were prescribed, and a poultice ordered to the tumor.

On the 18th May I punctured the abscess. He recovered a temporary use of the limb, and went into the country for the benefit of his health.

About the commencement of July, I was again desired to visit him. He had returned from his excursion in a considerably worse condition than he had departed. The thigh was now permanently bent at nearly a right angle with the

body. He complained of exquisite pain upon the slightest movement of the leg; and, upon examination, another inguinal abscess was detected, somewhat lower than the site of the original tumor. This was allowed to burst under the use of fomentations and poultices; the discharge exhibiting the peculiar curdy matter of strumous suppuration. The parts around the great trochanter of the femur were considerably inflamed, and motion in the acetabulum aggravated the permanent pain in the joint itself. Leeches were therefore applied every third day until the local inflammation was suppressed. As the active inflammation subsided, I was desirous of trying the effects of counter-irritation, and proposed blisters. Their application, however, was objected to by the parents, who were fearful of inflicting pain upon the child. Issues were also opposed upon the same principle.

Under these circumstances I prescribed six drops of the tincture of iodine *ter. die*. During the administration of this medicine, a third abscess formed, of great extent, beneath the fascia lata. This membrane consequently became greatly distended by the contained matter. By the diligent use of fomentations, &c. the integuments ulcerated below the insertion of the tensor vaginæ femoris, and a large quantity of flaky pus was discharged. At this period the posture of the patient was sedentary, with the trunk inclined forwards, and the femur forming an acute angle with the body. When he stood upon the sound leg, and the heel of the diseased one was gently elevated, he complained of severe pain in the hip-joint, which became intolerable on the slightest rotation of the limb. He was occasionally distressed with pain in the knee, but it never affected him very severely during the progress of the complaint. Periodical paroxysms of hectic fever took place after the bursting of the third abscess, and the constitutional irritation was severe.

The dose of the tincture of iodine varied from five to seven drops twice or thrice a day. I was determined to saturate the system fully with this medicine, and correct, if possible, the vitiated composition of the blood. He pursued this system regularly for ten or twelve weeks; aperients being occasionally prescribed. The sanious and sero-purulent discharge from the abscess became more laudable in appearance, and uniform in consistence. The patient gradually assumed a more healthy aspect as the constitutional sympathies subsided. A liberal diet was then ordered, with animal food and porter.

Under this treatment he rapidly improved, and was soon able to move about on crutches. At present (about eight months from the discovery of the disease) he daily walks to and from school, nearly a mile, morning and evening. He walks unsupported, and, when inclined to do so, he can run fast, and enter into the active sports of children, as usual.

In several other scrofulous cases, I have administered iodine with occasional success, in medium doses, duly persisted in. By thus saturating the system with the medicine, I have seen inflammatory affections of the periosteum of the metacarpal bones, and also incipient necrosis of other osseous textures gradually subside, and a salutary action of the capillary vessels supersede their previously morbid condition.

I shall conclude this communication with a few brief remarks upon strumous diseases in general.

In the first place, there appears to be an hereditary predisposition to this disease in the individuals affected by it. This predisposition may be defined to consist in a peculiar organic construction and conformation of the capillaries of the sero-sanguiferous system, producing an inertia in the functions of those capillary organs, whereby they become incapable of offering a salutary opposition to a morbidly irritating and exciting cause.

Secondly, this latent predisposition runs into diseased action, being morbidly developed by the vitiated contents of the sero-sanguiferous system acting upon their containing organs; thus producing a proximate cause for the manifestation of the morbid effects, and the several consecutive phenomena of scrofulous inflammation.

Lastly, the remote cause of the developement of this strumous predisposition may be referred to the vitiated contents of the *prima via*, and consequently of the disordered functions of those organs employed in the digestion of the food; therefore, the preliminary operations of the sanguification of the chyle being materially impeded, the blood prepared for the support of the system will be supplied of diminished quantity and diseased quality.

From these propositions it will be obviously deduced, that, to remove the exciting causes; to amend the diseased quality of the blood; to restore general constitutional vigor, and to obviate all preternatural local determinations, are the principal indications to be fulfilled in the treatment of scrofulous diseases.

Liverpool; November 5th, 1829.

COMPRESSION.

On the Efficacy of Pressure by the Application of Bandages in Cases of Phlebitis, Phlegmonous Erysipelas, Burns, and Wounds in Dissection. By ALF. VELPEAU. (Condensed from the *Revue Médicale*, Juin 1829.)

HOWEVER promptly and energetically we may treat patients who are labouring under either of the above maladies, by any of the ordinary modes of practice, it is very certain that we shall frequently fail. We are led, then, both from humanity and our love of science, to seek for new means of affording relief. The success of the treatment adopted in the following cases will no doubt induce other surgeons to give it an impartial trial.*

CASE I. M. G. was attacked, in July 1826, with severe pain in the left inferior extremity, and with all the ordinary symptoms of inflammatory fever. Twenty-four hours after, the whole of the leg and thigh were greatly swoln, excepting the outside of the latter. The skin was partially red, especially in the course of the internal saphena vein, and on the outside of the leg. The least motion or pressure gave excessive pain. In the leg the vein could not be felt, on account of the swoln and tense state of the integuments; but, at the upper part of the thigh, where the inflammation was less severe, the saphena formed an evident round cord, which was easily detected under the skin. The pulse was full, quick, and strong; skin hot and dry; great thirst; tongue white; no pain in the chest or belly. The only fact that could be ascertained which could bear at all upon the origin of these symptoms, was that the patient, in making a violent exertion in bathing three days before, had felt a cracking and pain in the lower part of the affected leg. Besides this, a slight excoriation on the outside of the heel, which had now entirely healed, had been in a state of suppuration for a week. These were the only circumstances which appeared to have any connexion with the state of the patient.

He was bled to twelve ounces; and, for the purpose of arresting the progress of the inflammation, sixty leeches were applied principally to the bend of the groin. Emollient poultices; warm bath.

On the third day, the pulse was less full, but still as quick; thigh not so much swoln, but the leg more so than

* M. Velpeau has published many other cases, which confirm the efficacy of this practice. Vide *Archives Générales*, June 1826, p. 192, and July 1826, p. 395.—EDITORS.

before. Forty leeches applied below and around the knee; warm bath repeated.

On the fourth day, the inflammation remained unabated; pain excessive; and the leg, which felt very heavy, now appeared to be the seat of general phlegmonous erysipelas. On the internal part of the thigh there were several red blotches, extending to near the groin; the hardened and enlarged vena saphena could be distinctly felt to within six inches above the knee. The superficial inguinal glands were slightly painful and swoln. General symptoms unchanged.—Twenty leeches to the groin, and the same number to the leg.

Fifth day: no evident abatement of the local symptoms; fever somewhat diminished. M. Marjolin was now consulted. M. Velpeau proposed a compressive bandage, but it was deferred for twenty-four hours, during which time the inflamed parts were covered with compresses wetted with cold water, but without any good effect.

Sixth day, at ten o'clock in the morning, M. V. surrounded the limb, from the toes to near the groin, with a circular bandage moderately tightened, and afterwards wetted it with cold marshmallow water. The pains continued to increase in severity for three or four hours, at the upper part of the foot and internal malleolus, and remained in these parts until the next day; but towards evening every other part was much less painful.

Seventh day.—Patient has slept. Feverish symptoms have disappeared, and perspiration has broken out. The thigh is now neither red nor swollen; the vena saphena can still be felt, and remains hard and slightly painful. In the leg the swelling and other symptoms of erysipelas have diminished more than one half in degree; but, around the internal malleolus, the redness, pain, and tension, were unchanged, and presented every appearance of an approaching collection of matter, but, as no fluctuation could be detected, the bandage was again applied.

Eighth day.—Has not passed so tranquil a night. The back part of the foot and above the ankle are more painful and swoln. In the former situation there was evidently an abscess, which M. Velpeau opened, and gave exit to a small quantity of matter. Fifteen leeches were applied around the ankle, where there was no appearance of fluctuation. But little swelling or pain in the other parts of the leg or thigh. Pressure continued, except upon the part in pain, which was covered with a poultice.

Ninth day.—The local bleeding had produced no relief.

The abscess was nearly closed. The bandage was applied no higher than the knee.

Eleventh day.—M. V. thought he detected pus in the painful part. An incision was made nearly to the tendon of Achilles before the abscess was opened, and about an ounce of well-formed pus escaped.

From this time the cure proceeded uninterruptedly, and the patient was enabled to resume his accustomed occupations. The vena saphena major, however, remained hard for a considerable time, and the limb but slowly recovered its natural strength; and, although a laced stocking was worn, it still remains occasionally painful and slightly swollen, especially after any fatigue, or when the general health is deranged. This may probably depend upon the total or partial obliteration of the principal superficial vein of the part.

CASE II. A strong and well-formed labourer wounded himself, in the course of the cephalic vein of the thumb, with the point of a vine-knife, in October 1826. The wound, which was very small, suppurated without giving rise to much pain, until the 10th November. The parts around it then became affected with severe inflammation, which extended in tortuous streaks over the back of the hand.

On the 15th, M. Nivert saw the patient. The whole of the metacarpal plexus of veins was of a deep red colour: the intervals between these highly coloured cords were equally inflamed, but they presented only a slight erysipelatous redness. The swelling was not considerable, although the pain was acute, and there was some fever.—Twenty leeches, and afterwards a bread poultice, were applied to the hand.

16th.—The veins of the forearm are now implicated, and form red and highly sensible cords throughout the whole extent of this part of the limb, the swelling of which is becoming considerable. There are some patches of erysipelatous inflammation on the upper arm, but the pain is there much less severe than below the elbow and on the hand. The pulse is strong, full, and frequent; skin burning and dry; face flushed.—Twelve ounces of blood to be taken; poultices continued.

17th.—Pulse 120, not quite so full as yesterday; fever intense; patient confused in his ideas, and agitated. The swelling has extended to the axilla; the glands are somewhat enlarged and painful. In fact, the whole limb is now affected with very severe phlegmonous erysipelas, the

inflammation being most intense throughout the course of the superficial veins. M. Nivert, who had witnessed many of the cases previously related by M. Velpeau,* determined to make trial of pressure. He forthwith surrounded the whole arm with compresses wetted with marshmallow water, having first applied a gauntlet,† and filled the palm of the hand with lint. He then, with a long bandage, about three fingers broad, made an exact, regular, and moderate pressure over the hand and arm, up to the shoulder. The patient was much alarmed at the application of a bandage upon parts so exquisitely painful, and he complained severely for three hours; but towards evening his fears were in a great measure relieved, and the feverish symptoms had much subsided. The bandage was again wetted, in order to increase the compression without removing it.

18th.—Has had a good night. Pulse eighty; slight perspiration. Patient is cheerful, and suffers but little. The swelling and redness of the limb are greatly diminished. The axilla and the upper part of the arm especially are nearly of a natural appearance, and the basilic and cephalic veins can now be felt like hard and knotty cords. The bandage was again applied so as to press firmly upon the hand, and gradually less as it was carried upwards towards the shoulder.

20th.—Great improvement. But little inflammation above the elbow; swelling of the forearm has nearly disappeared, but the back of the hand is still painful, and pits on pressure. Wound of the thumb has healed.—The gauntlet no longer to be applied. Graduated compresses to be placed on the back of the metacarpus, to secure a proper pressure from the bandage, which was now carried no higher than the elbow.

In three or four days this patient was completely cured.

CASE III.—M. Caoly, a medical student, three days after having pricked himself on the middle finger of the left hand in dissecting, felt a numbness and uneasiness over the whole of the arm. The next day the injured finger was red, painful, and swollen, and the same appearances were extended to the hand, upon which twenty-five leeches were applied.

M. Velpeau saw him on the third day. All the veins of the metacarpus were of a deep red colour, and those of the

* Archives Gen. Juillet 1826.

† *Gantelet*. A kind of bandage which covers the hand and fingers like a glove, from whence the name.—ED.

forearm, although less hard and painful, were highly inflamed. The inflammation had now extended beyond the elbow; there was severe fever, pulse 100; the whole of the cellular tissue of the finger, hand, and wrist, was affected by the inflammation. M. V. proposed compression, which was submitted to with some repugnance. Although the middle finger alone was greatly swollen, the gauntlet was employed, and a roller was then applied as neatly and methodically as possible, from the finger to the shoulder. No exacerbation of the symptoms followed. In the evening, the pain, heat, and fever, had much diminished. The bandage was wetted with brandy and water, to tighten without removing it.

Fourth day.—No fever. The patient called upon M. Velpeau to be dressed. The erysipelas had disappeared from the arm, and nearly from the forearm, but still the superficial veins of the latter part appeared like red streaks, and were slightly painful. The hand still remained swollen.

The same treatment was continued the fifth and sixth day. The seventh, there remained only a slight swelling of the finger originally injured. On the eighth day the cure was complete.

CASE IV.—M. F., a medical student, had had a slight excoriation on the thumb for some days, when he consulted M. Velpeau. The thumb, hand, fore and upper arm, were swollen and painful; streaks of a livid red colour marked the course of the cephalic and other veins around the thumb; but these inflamed lines were less prominent than in the three preceding cases, although the glands in the axilla were as sensible to the touch, and as perceptibly enlarged. It was presumed that this was a case of inflamed lymphatics rather than of phlebitis. The bandage was, however, applied as before mentioned, from the fingers to the shoulder; and it was wetted in the evening with spirituous lotion. As soon as it was applied, the pain began to diminish.

On the following day, the axillary glands could scarcely be felt; the swelling of the arm had disappeared, and there was neither redness nor pain of the forearm or hand. The bandage was continued until the fifth day, when the cure was perfect.

CASE V.—In February 1828, M. O., a medical candidate, about thirty years of age, who had habitually enjoyed good health, excoriated the thumb of the left hand in placing a putrid body upon a table, for M. Velpeau's

lecture on operative surgery. On the first day the wounded part was slightly painful; but not until the morning of the third day did any symptoms arise which attracted much attention, when a rather severe shivering occurred, and at noon the face was pale, the features drawn, and the eyes dull. M. O. felt himself very uneasy, and retired to bed. The thumb had now begun to swell, and there was a stiffness of the arm. A fainting fit, followed by high fever and a very restless night, succeeded.

On the morning of the fourth day, M. Velpeau saw this gentleman. His pulse was 115, strong and hard; skin dry and burning; tongue tumid and white; chest and abdomen free from pain; the face was slightly tinged with a dirty yellowish colour; the hand and all the fingers were livid and much swoln, and the forearm and arm were also attacked, but in a less severe degree. The skin was highly coloured up to the elbow, but neither the veins nor lymphatic vessels could be felt. The pain was most severe upon the thumb and back of the hand, near the root of the middle finger. Twelve ounces of blood were taken from the arm, and emollient poultices applied.

In the evening the general symptoms were the same: the axillary glands were now inflamed, and the erysipelas had extended to the shoulder. The hand and wrist were so much swoln and livid as to threaten to become gangrenous. M. Velpeau applied first the gauntlet, and then the roller to above the insertion of the deltoid, so as to secure an equable pressure; but he omitted to place any compress in the hollow of the hand. The limb was occasionally wetted through the bandage with marshmallow water.

Fifth day.—Fever has subsided. Countenance nearly natural; the inflammation of the arm and forearm diminished, but there were still darting pains in the hand, which remained livid and much swoln. The epidermis had peeled off, and a vesicle, about half an inch in size, had formed around the wound. The bandage was reapplied as before, *no compress being placed in the palm of the hand*. Brandy was added to the former lotion. The hand was placed upon a cushion; but severe pain and constant darting, with great heat, continued in it the whole day and next night.

Sixth day.—The arm and forearm better, but the back of the metacarpus was much tumefied, and appeared as if there was a deep-seated collection of matter. The wound was enlarged with a bistoury, but no pus escaped. The bandage was again applied, but in such a manner as to

increase the pressure upon the fingers and the back of the hand; but there were still no compresses placed in the palm of the hand to ensure an equable compression.

Seventh day.—Arm and forearm well. The hand is less red, and not so much swoln, but remains very painful, and is described by the patient as feeling like the foot when a tight shoe has been worn. M. Velpeau was induced to believe that the greatest part of the suffering was owing to his want of precaution in not having filled the palm of the hand, in consequence of which the pressure was partially made. Having repaired this omission, the bandage was replaced rather looser than before, and during the day the pains ceased.

Ninth day.—Has passed a good night. Hand less swoln, but a gangrenous spot had formed at the extremity of each finger, and a part of the last phalanx of the forefinger was afterwards destroyed.

For some days the bandage was continued, and the patient was cured.

CASE VI.—Gazeux, a servant, twenty-five years of age, of a sanguineous and robust constitution, was attacked, without any apparent cause, in September 1828, with pain, heat, and some swelling, around the left elbow. Fever succeeded, and M. Guerin de Manthelan was consulted, who, finding evident proof of gastric derangement, prescribed an emetic to be given the following day.

On the third day the fever was diminished, and the elbow less painful; but on the fourth and fifth day every symptom was much more severe.

M. Guerin was again called in on the sixth day. The whole of the forearm was now affected with severe darting pains, but still there was but little swelling. A large bread poultice was applied.

The patient was not again seen by the physician until the tenth day, at which time very severe phlegmonous erysipelas extended from the fingers to the upper part of the arm. The skin was red, and in some parts livid, particularly around the flexure of the elbow-joint, which was also extremely painful, hot, and dry; pulse 110, strong and full. Immediate recourse was had to compression. Although there was as yet no sensible swelling of the fingers, M. Guerin applied the gauntlet as a matter of precaution, and then a roller, as equably as possible, to within a short distance of the axilla, wetted with saturnine lotion.

Eleventh day.—Pain and swelling of the limb conside-

rably diminished; but, the pulse still remaining hard and frequent, the patient was freely bled from the arm.

Twelfth day.—No fever. Has had some tranquil sleep. Inflammation now confined to the elbow, and even in that part is much diminished. There appears to be no longer any danger of suppuration.

For four or five days the bandage was continued, and the cure was completed in three weeks.

Conclusions. M. Velpeau considers it unnecessary to add to the number of detailed cases upon this subject. He has preferred the above instances, as they show that compression succeeds equally well in severe phlebitis which has existed for several days, (Case 1;) in phlebitis not less severe, but more superficial, and of more recent date, (2d and 3d Cases;) in inflammation of the lymphatic vessels complicated with erysipelas, and perhaps with phlebitis, (Case 4th;) in phlegmonous erysipelas of the severest kind, produced by wounds in dissection, (Case 5th,) whether it depends upon superficial or deep-seated phlebitis, upon injury of the lymphatic vessels, or merely upon inflammation of the subcutaneous cellular tissue, and in simple or phlegmonous erysipelas produced by any other cause, (Case 6th.) To confirm these various facts, M. Velpeau refers to cases he has before detailed in the *Archives Générales*, and to a case of phlebitis in the lower extremities in a pregnant woman, published by M. Goupil.* Six or eight equally conclusive cases have also been related by M. Guerin;† and M. V. has witnessed many other instances of ordinary erysipelas of the limbs, and after bleeding in the arm, cured by the above plan, but which were too similar to those described in 1826 to be again particularly mentioned upon the present occasion. His experience induces him to place such high confidence in the efficacy of pressure by means of bandages, that he does not hesitate to recommend it as “*un moyen héroïque*,” as the most certain remedy which we possess against every kind of diffuse inflammation of the limbs, and other parts of the body which will admit of its exact application. In phlebitis, so long as the attack is limited to a small extent, and is slight in severity, we may perhaps rely upon leeches and poultices; but, as soon as the inflammation has a tendency to pass onwards towards the trunk of the body, or the surrounding cellular tissue

* *Nouv. Biblioth. Med.*, Jan. 1827.

† *Archives*, Septembre 1827.

becomes inflamed, we should then have recourse to compression. If the disease does not extend beyond the commencement of the limb, and if abscesses are not formed either externally or internally, it is almost always arrested by this means; and even if the blood is contaminated by an admixture of pus, still pressure should be employed, because, by removing inflammation of the limb, the bandage destroys at least one source of mischief, and enables the constitution to resist other symptoms with more energy.

By incisions, punctures, or excoriations in dissection, both surgical students and their teachers not unfrequently lose their lives. If these injuries produce no general reaction, and remain strictly local, cauterization at first, and afterwards leeches and the usual topical applications, will in most cases be sufficient. If the wound is deep, and affects the tendons or their sheaths, or penetrates into a joint, the antiphlogistic treatment may be indispensable. But, whether the disease is transmitted by the veins, lymphatic vessels, or the cellular tissue, so soon as the inflammation extends to some distance beyond the wounded part, no other mode of treatment can at all be compared with compression. The septic nature of the disease does not prohibit it; for, provided it is possible to confine, as it were, the inflammation under the bandage, we shall rarely fail to limit its ravages, to diminish its severity, and even to dispel it altogether in the course of a few days.

Such is also the case in phlegmonous erysipelas, or diffuse phlegmon; and M. Velpeau expresses his surprise that in a disease which practitioners confess is one of the fatal shoals of surgery, we should still persist in the application of leeches and emollients, or in making deep and numerous incisions upon the inflamed parts, instead of having recourse to a simple compressing bandage. No doubt, general bleedings, of fifteen, twenty, or thirty ounces, for three or four successive days, according to the practice in England, or the numerous incisions recommended by A. C. Hutchison, Beauchêne, Bodson, Vincent, &c., when the disease is in an advanced stage, is to a certain extent successful, as is proved by the practice at the hospital of Saint-Antoine, and the memoir by Mr. Lawrence,* but such a mode of treatment cannot fail to have a prejudicial effect upon the general health of the patient, leaving out of the question the suffering it inflicts. Compression disturbs none of the functions of the body, and cures much

* Med. Chir. Trans. vol. xiv. 1828.

more frequently and more promptly than all the bleedings and incisions that can be imagined. It follows, then, according to M. Velpeau,

1st. That, to prevent phlebitis after amputations, it is prudent, as is constantly practised by M. Richerand at the hospital Saint Louis, to establish an exact but moderate compression from the commencement of the limb to within a short distance of the wound; which we should, besides, endeavour to unite as soon as possible.

2d. That, by the aid of a *well-applied* circular bandage, phlebitis will seldom occur, and very rarely be dangerous, after those operations which are practised by some surgeons for varicose veins of the legs.

3d. That phlebitis, erysipelas from dissection wounds, or ordinary erysipelas, may be almost constantly arrested and cured by dexterously applied compression, if it is had recourse to before suppuration is completely established; and that, in all these diseases, compression ought to constitute the chief remedy; while bleeding, leeches, incisions, &c. are only to be occasionally employed as auxiliaries.

M. Velpeau has before* mentioned the precautions which the application of the bandage requires, and described its mode of action. He states it to be a mechanical agent, the efficacy of which entirely depends upon the hand that applies it; and that, if it fail in cases which appear to indicate its employment, the surgeon, and not the remedy, is mostly in fault. If the pressure be not regular, or either too great or too little in any point; if the various hollows and inequalities of the limb be not adroitly made level with the surrounding surface, then, in all probability, the pain will be increased instead of diminished, and other perplexing symptoms be produced. As a proof of the strict attention required to ensure an equal pressure from the bandage upon *every part*, the fifth case is referred to, in which, confessedly, proper precautions were not at first taken, and consequently bad symptoms arose, and relief was delayed. The pressure should commence as far as possible below the inflamed part, and be carried considerably above it.

M. Velpeau is not acquainted with any author who has expressly said that compression by means of a bandage was the best mode of treating phlebitis, or phlegmonous erysipelas without solution of continuity, or those acute inflammations which result from wounds in dissecting. In the

* Archives, Juillet 1826.

sixteenth volume of the *Dictionnaire de Médecine*, there is, indeed, this expression: "Slight methodical compression made upon the limb has frequently succeeded," as is proved by a case related by M. Goupil, in the *Bibliothèque Med.* Janvier 1827; but M. Velpeau had previously stated, in commenting upon phlebitis,* "that, whether the tumefaction of the arm which results from a lancet wound depends upon inflammation of a vein or the subcutaneous cellular tissue, does not at all affect the question of bandaging the part. In each case compression offers the same advantages." In different works there are certainly facts related which ought to have led to this practice. The case reported by A. Paré describing the effects arising from bleeding the king of France, which had well-nigh proved fatal, must be considered as one of phlegmonous erysipelas, if not of phlebitis; and the danger was certainly much more averted by a compressing bandage than by any of the other remedies employed. When Hunter proposed to compress the vein between the trunk and the injured or diseased part, for the purpose of limiting the inflammation, would it not, M. Velpeau asks, have been more simple and natural to have applied pressure over the whole extent of the limb? The success obtained from this practice by M. Bretonneau in burns, and contused wounds complicated with gangrenous erysipelas, was sufficient to lead to the inference that it would be equally useful in diffuse phlegmon, or in the inflammations arising from wounds with instruments soiled by deleterious matter.

In conclusion, M. Velpeau remarks that the facts hitherto published by himself or others upon this question may not be sufficiently numerous or conclusive to establish that conviction in the minds of the profession in general which he himself feels. He is aware that he may be accused, perhaps, of over-estimating the importance of the practice he so warmly recommends. His wish is not to establish axioms, but merely to induce other surgeons to judge for themselves, and to repeat his experiments with all the care, and precisely in the manner that he has described; and he feels confident that the result will be much more favorable than may at present be anticipated.

The efficacy of compression in different kinds of diffuse inflammation of the extremities, does not rest upon the authority of M. Velpeau alone. In 1815, Bretonneau

* Archives, tom. ii. p. 405.

defended a thesis, which was indeed very indifferently received by the professors, the object of which was to show the utility of compression in phlegmonous erysipelas. In the same year, also, Dr. Balfour, of Edinburgh, recommended the same treatment in chronic and even acute rheumatism;* a disease which, although differing in many respects from erysipelas and the other inflammatory affections for which compression by bandages is advised by the French physicians, is by no means so essentially different from them as to render it improbable that in each the same treatment might apply. Dr. Balfour supported his doctrine with ingenuity, and detailed many cases which appeared satisfactorily to prove the benefit of applying moderately tight bandages in cases of rheumatism, however much the local suffering and appearances seemed to contra-indicate such a mode of treatment. The practice, however, has never been very generally adopted.

Many severe cases of diffuse inflammation, arising from various causes, have recently been published in the continental journals, in which compression was the chief and very beneficial remedy. But although, with such strong additional evidence before us as that which has been adduced by M. Velpeau, we cannot doubt the high merit of the treatment by compression, we conceive he places too implicit a reliance upon it. He sometimes either altogether omits, or at least very ineffectually resorts to, constitutional treatment.

To encourage other surgeons to adopt the practice, M. Velpeau informs us that he has never seen any ill effects arise from its *judicious* employment, during ten years' extensive trial of it. Without this assurance, some apprehension might be felt by those who have not had personal experience of the safety of compression, of applying it in cases of severe local inflammation, where it might be imagined the slightest pressure could not be borne. For some time after the application of the bandage, the pain, it appears, is much increased; but we are not to remove it on this account, as the suffering afterwards gradually diminishes, together with every other symptom.

To communicate an apparently very valuable practical fact, has been our only object. Those who are desirous of knowing the theory of the *modus agendi* of the treatment so strongly recommended, may consult Dr. Balfour's paper,

* Observations on the Pathology and Cure of Rheumatism; by WILLIAM BALFOUR, M.D.—Edinburgh Med. and Surg. Journal, vol. xi p. 168.

to which we have already referred, and the memoir of M. Velpeau, in the *Archives Générales*, Juillet 1826, p. 425. In the *Traité de Médecine Opératoire* of M. Roux, and that of Sabatier, and the *Elemens de Pathologie* de MM. Roche et Sanson, much interesting information is contained upon the general subject of compression as a remedial agent in disease.—EDITORS.

HERNIA.

Two Cases of infrequent and simulated Hernia. Communicated by GILBERT T. BURNETT, Esq. Surgeon, &c.

T. P., aged sixty, entered on a detail of his complaints by asking whether it were “possible for the bladder to escape from the belly into the purse? for,” continued he, “I have been for several years subject to an enlargement in my left groin, which, within the last twelve or eighteen months, has considerably increased; and it does seem to me that, whenever I make water, the swelling diminishes in size.” The question was one not difficult of solution, and the history of the case appeared to be shortly this: Being, from his occupation, (a master builder,) obliged to mount ladders, and trust himself frequently on places of doubtful footing, he had often had falls of greater or less severity, and to a strain, or some such accident, the origin of the tumor might be traced. The exact period of its duration he knew not, but thought it had probably been unobserved or only half-noticed for a considerable time; for, even after his attention was more particularly drawn towards a soft lump in his right groin, which disappeared under the pressure of the finger, it was not until it became larger than a walnut, and constantly returned shortly after the finger was removed, that he became at all uneasy about it. He formerly consulted a surgeon of some eminence in this town, who laughed at his idea of the size of the tumor being lessened by the passage of urine; told him that it was an ordinary rupture, and ordered him to wear a common truss. This he attempted to do; but, after trying various instruments, and several modifications of pads and springs, the intolerable pain which the pressure gave, and the constant reappearance of the swelling below the cushion, compelled him shortly to desist; and as the tumor itself, when unmolested, gave him no pain, he allowed two years more to elapse without any further surgical treatment being had recourse to. During this period no fresh symptoms made their appearance, but the still-increasing magnitude

of the tumor distressed him, and hence he was led to consult another surgeon, who, after two examinations, decided it to be formed by the protrusion of a part of the bladder, and dissuaded him from the use of any truss, as it had previously occasioned so much uneasiness. These conflicting opinions and directions, though probably both justified by the different stages of the disease at such distant periods, distracted his mind; and hence the question he proposed as to the possibility of the bladder protruding through the abdominal parietes and entering the scrotum.

When I examined him, the right inguinal canal was distended in the greater part of its course, but, as is frequently the case in old ruptures, the internal ring seemed nearer than it should be to the external, although the course of the hernia did not lead to the supposition that it had been originally direct. The tumor occupied the right side of the scrotum nearly to the bottom, and behind and under it the testicle might be indistinctly felt. Had not his questions raised a suspicion of the nature of this case, the fluctuation of the tumor and its situation might have given the idea of its being hydrocele of the cord: but its clearly decreasing in size on pressure, which pressure forced the urine to be passed through the ordinary canal, would have decidedly cleared up any ambiguity which the first examination might have perchance excited.

As at this period (March 1826,) it had so long existed, probably for five years or upwards; as the protruded portion of the bladder seemed to have formed adhesions with the surrounding cellular membrane, for, although the contents of this cystic pouch could be evacuated by pressure, the pouch itself was irreducible; as the patient's health was in general good, the bowels regularly open, and no suspicion of any portion of intestine being implicated in the descent; as it was rather an inconvenient than a painful tumor, there seemed nothing feasible to be recommended save a suspensory bandage, to check its further increase, and caution to avoid, by any sudden or violent exertion, the complicating a cystic with an intestinal rupture. Adhesions had probably early formed, even before the first consultation, and hence, although the hernia was apparently reduced, the fluid only was returned, and the sac was subject to the pressure of the truss, giving rise to the pain alluded to, and rendering it impracticable to pursue the plan his first surgeon recommended.

This patient lived three years after the period now referred to, with no further inconvenience than being obliged

to use his hand as a detrusor urinæ when he wished entirely to evacuate his bladder. Indeed, he died only last spring, and from inflammation of the lungs. I had always kept my eye upon him, and did anxiously desire to have had an opportunity of examining the parts; but prejudice, and a mistaken respect for the dead, (which is rather an insult and a crime to the living,) prevented that which would have rendered this case still more interesting and satisfactory, by perfecting the record.

The above is the only case of cystocele that I have ever met with, or indeed been able to get any contemporary account of, among my professional acquaintances. It is, indeed, I believe, a very rare disease; and, although there are several cases on record before this occurred to me, I had always regarded it as one of those possibilities mentioned in nosologic works for the sake of system, rather than as a probability of so much practical importance. In having presumed to think these details might not be unworthy a page in the London Medical and Physical Journal, I have been influenced by the consideration of how much discredit, perhaps unjustifiably, attaches to a surgeon who, forgetting those rare possibilities, ventures a decided and too hasty diagnosis, which is subsequently disputed, and ultimately proves to be incorrect; and patients seldom acknowledge that they have had any previous consultation until they have obtained the opinion sought, and then immediately turn round with "But Mr. A., B., or C. says so and so."

Mr. POTT, in his surgical works, mentions two cases of cystic hernia, which he observes are the only two he ever met with; and, as more advantage is often derived from recalling to public attention the experience of former times, than in relating the more limited practice of our own, it may not be perhaps irrelevant shortly to advert to them.

"A poor fellow," writes Mr. P. "who worked with a farmer at Islington, came to St. Bartholomew's, with a large troublesome swelling in his scrotum. The tumor was large, tense, of a pyriform figure, palpably contained a fluid, gave no pain, but from its weight when full; and had every mark of a hydrocele, except that the testicle was perfectly distinguishable at its bottom. While I was hesitating concerning this circumstance, the man said, Sir, I can get rid of it all by pissing, but it fills again in a few hours, especially if I drink. Upon my seeming to disbelieve what he said, he took up his scrotum, and, squeezing

it together with some violence, discharged the whole by the urethra."

The other case, which is one of considerable interest, occurred in a boy six years old, who at that age was seized with an acute pain about the region of the pubes, which lasted for an hour and a half, and then suddenly ceased. After a few days a small tumor was discovered in the groin, about the size of a pea; but, as it gave no pain, no notice was taken of it. After a time it increased in size, got lower and lower into the scrotum, and he found himself frequently urged to make water. He was examined by a practitioner in his neighbourhood, who, not knowing what to make of it, advised the letting it alone. Others subsequently deemed it a scirrhus testicle, and proposed castration. Mr. P. was not consulted till the boy was thirteen years old: he did not think it was a scirrhus testicle, yet only one testicle could be felt. The tumor was perfectly even on its surface, indolent, had a stony incompressible kind of hardness, but never occasioned pain in the back and loins. The trouble it gave the lad, and its disposition to increase, seemed to authorize its removal, and the operation was performed. A firm white membranous cyst, connected loosely with the cellular membrane, in the same manner as a hernial sac, was dissected all round, and found to be dependent from a membranous neck or duct, which passed through the opening of the abdominal muscles; which neck was cut through immediately above the tumor, upon the division of which, about four ounces of clear liquid issued, and, the mouth of the cyst expanding, disclosed a stone exactly resembling what is found in the human bladder. Subsequently the lad passed urine through the wound, and the case, which ultimately did well, proved to have been one of stone complicated with cystocele.

I purposely avoid referring to any of the other varieties of cystic hernia, and have merely quoted the above cases to prove how difficult is the diagnosis where it may be of extreme importance to distinguish rightly. In Manuals of Surgery, the characters of each form are often so laid down that a novice might think it scarcely possible to err; but those who have practically attended to the matter well know that the most familiar and common ruptures are occasionally ambiguous and obscure.

Allow me to mention a case of a different kind to the foregoing, but yet which, I think, is immediately in point.

I was sent for to attend J. C., aged nineteen, who, while lifting a heavy burden, was suddenly seized with a

pain in the right groin, and, on putting his hand to the part, perceived a lump about the size of a nutmeg, which was incompressible, and which resisted his attempts to return it into the abdomen, whence it had, during violent exertion, descended. On inquiry, I ascertained that he had long been occasionally subject to a small swelling in the part, but which had never before protruded so far, had always been without pain, and which in general receded on slight pressure, or when he was in a recumbent posture. It had now, however, been down for three days, and had resisted every effort at reduction. The first two days it had given him but little uneasiness, but for several hours past it had been getting more and more painful; and I was therefore sent for to examine it. It was a small tumor within the inguinal canal, nearer to the internal than to the external ring, but slightly compressible, and painful to the touch. There was much anxiety and irritability about him, the pulse quick, and the bowels had not been open since the last descent of this inguinal tumor. I decided immediately in my own mind that it was a case of bubonocoele, bled him freely, employed the taxis, yet unsuccessfully, the tumor resisting all attempts to return it into the abdomen, whence it had evidently emerged. It had a less elastic feel than ordinary intestinal hernia, being in fact more like what might be supposed to indicate the presence of a lump of half-hardened feces in the pouch. A hot bath was then ordered, in which the patient was put, when, on renewing the taxis, and taking hold of the scrotum, there was in it but one testicle, and that on the left side; the right side of the scrotum had no testicle within it. A new light was thus thrown on the case, which proved to be one of those infrequent and tardy descents of the testicle, which, from its sudden appearance on exertion, its irreducibility, and the peculiar coincidence of constipation, had in some measure simulated an intestinal hernia. The means resorted to had so far relaxed the parts, that the testicle was subsequently returned, and an operation, which I had contemplated, escaped.

Such a case as this might mislead once, but such an event could never occur a second time: its notice may, perhaps, prevent even such a solitary error.

Malingers not unfrequently simulate hernia by forcing up one or both of their testicles into the groins; and a case has been mentioned in which a soldier, who wished to gain his discharge, thus counterfeited a double rupture. In this man the cremaster muscles were so powerful, and so

directly under the control of the will, that he was able, by their action only, to elevate the testes to the groins, and keep them suspended at the external rings.

A somewhat analogous instance is on record in a female servant, strong, stout, and in good health, who had a painful tumor in each groin, which had clearly passed out of the abdomen, but which resisted every attempt at their reduction. They subsequently became so painful as to hinder her working, and were accordingly removed by operation. They were then seen to be the ovaria, which had thus descended to the groins. Previous to their excision, she was plump, had large breasts, and menstruated freely: afterwards, although she enjoyed good health, she became thinner and more muscular, her breasts disappeared, and she never menstruated.

Let me, in concluding, mention two other cases of hernia, which, although not interesting from their ambiguity, are warnings of the extent which neglected bubonocoele will reach, and which, I am fain to believe, are not frequent in their occurrence. I have never seen but two, one in hospital, the other in private practice. The first died, and was examined; the latter, which is of less extent, is in a man now living, though in a pitiable state. In both these persons, the whole or the greater part of the intestines and omentum were extra-abdominal; for, from dislike to wearing a truss in the early stages, a mere bubonocoele had become an adherent scrotal hernia, and gradually increased to such a degree that the scrotum formed a pouch reaching to the knees, the integuments of the abdomen being greatly dragged down; the penis entirely buried in the tumor; and the urine passed out at an aperture at the upper periphery of these immense oschroceles. The first was a good-tempered old man, who thought less of his enormous purse, than of the gout, with which he likewise was afflicted; but the other, a much younger man, though less burdened, seems but little familiarised to its weight and the chafing, which is a great impediment to walking, and far from reconciled to the impotency which has ensued; for the increase of the tumor having entirely enveloped the penis, although tortured by sexual desires, he has been absolutely emasculated for years. .

ULCER IN THE FAUCES.

Hemorrhage from an Ulcer in the Fauces; Ligature of the common Carotid.

To the Editors of the London Medical and Physical Journal.

GENTLEMEN: If the following case appear to you of sufficient interest, you will oblige me by giving it a place in your Journal.

John Webb, ætat. twenty-three, was admitted into the Middlesex hospital, on the evening of the 18th of October: those who brought him stated that he had suddenly lost a considerable quantity of blood from an ulcer in the fauces; but the hemorrhage had now stopped, and no apprehension was entertained of its immediate return.

The next morning, however, towards nine o'clock, the bleeding burst out afresh, and in a few minutes two quarts of blood were lost. The house-surgeon, Mr. LAIDLAW, hastened to the ward, and with great promptness compressed the carotid artery on the affected side, when the hemorrhage ceased. Notice being sent to me of what had happened, I went instantly to the hospital, and found the patient faint to the last degree, pale and bloodless.

On examining the fauces, I saw a ragged clot of blood adhering to the right side of the pharynx, while the left tonsil and adjacent surface appeared clear and healthy. I proceeded, therefore, without loss of time, to tie the right common carotid in the middle of the neck. Scarcely a drop of blood flowed from the incision made for this purpose; the pulse in the artery, when it was exposed, was exceedingly feeble; the internal jugular vein lay shrunk and collapsed.

After the operation the patient several times fell into an alarming state of faintness; but having taken some brandy, some Spiritus Ammoniæ Aromaticus in water, and some strong and spiced broth, he gradually rallied.

A few minutes after the artery was tied, I inquired of this patient whether he saw equally well with both eyes. He closed his eyes alternately, to ascertain the fact; and remarked, that his vision with the right eye was dim and obscure, while he saw distinctly with the left. At this time I could perceive no pulse in the right temporal artery. During the afternoon, distinctness of vision with the right eye returned; at the same time the pulsation of the right facial artery could be felt, though it was much less forcible than that of the left. The patient stated that he felt conside-

nable throbbing in the left side of the head. He dozed much during the day, and slept well the following night.

The next morning an attempt was made to learn the history of his indisposition. The account which he then gave, however, and has since repeated, is very imperfect. He states that, for the last four months, he has had a sore throat; that, three months ago, spots broke out upon his chest and legs; that he took pills for these complaints during the space of three weeks, and that his mouth was affected about a fortnight; that, under this treatment, the spots upon his chest went away; that, for the last six weeks, he has taken no medicine, but has used a gargle; and that his throat he has latterly conceived to be getting better. The spots on the legs and thighs have left superficial ulcers, (which, when they were shown for the first time some days after his admission, were healing.) He states that he had a gonorrhœa a year ago; sores on the private parts never.

The appearance of the throat on the 20th was the following: The right margin of the uvula, and the edge of the right side of the soft palate, were in a state of ulceration; the right tonsil was entirely destroyed, together with the posterior arch of the palate; the right side, and the greater part of the posterior surface of the pharynx, were ulcerated, and covered with viscid puriform secretion; at one part a portion of ashy slough adhered to the surface.

R. Decoct. Cinch. cum Acid. Sulph. dilut. ℥ viij. ter die.—Gargarisma e Chloridis Calcis gr. xv. cum Aquâ distillatâ îbi.

The patient's strength improved daily; but the appearance of the throat was not materially changed before the 31st, when, in place of using a gargle, he was directed to fumigate the fauces with the vapour of a scruple of cinnamon. The following day, the whole of the ulcerated surface was covered with florid granulations.

On the 3d of November, the fifteenth day after the operation, the ligature came away from the artery. The ulcer of the pharynx had begun to cicatrise.—P. in usu medicam. with full diet and a pint of porter daily.

On the 16th, the right side of the pharynx and palate had cicatrised. The ulcerated surface which remained was situated at the middle of the back part of the pharynx: it was an inch in length, half an inch in breadth; the ulcer yellow, and at one part deeply excavated; the cicatrised surface around of a bright red.—R. Pil. Hydrarg. gr. viij. cum Extract. Hyoscyami gr. iij. o. n.—R. Hydrarg. præcip.

albi ʒi.; Cretæ pt. ʒij.; Camphoræ ʒi. M. fiat pulvis; pauxillum ulceri quotidie applicand. Omitte alia medicamenta.

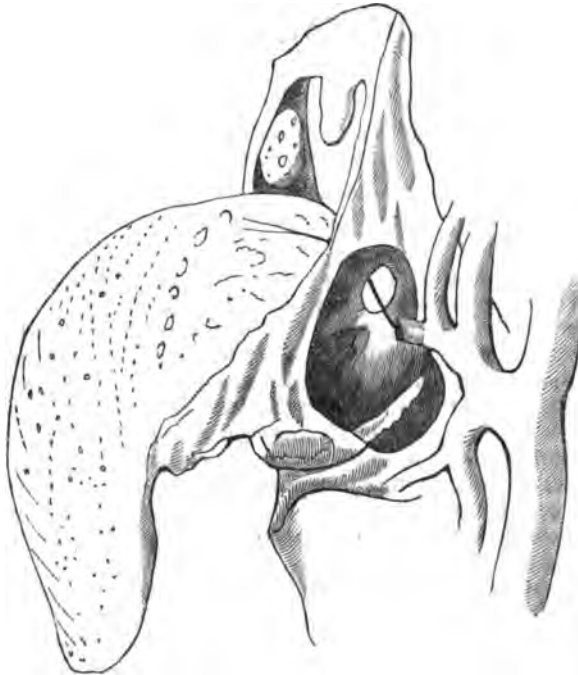
22d.—The ulcer at the back of the pharynx is healing rapidly. There is every reason to expect that in a few days it will have entirely cicatrised.

Till the ulcer in the throat assumed a healthy appearance, I felt considerable anxiety lest the hemorrhage should return; and I regretted that, instead of tying the common carotid, I had not tied the internal and external carotids separately at their origin. This operation (which, if I were again called to a similar case, I should probably adopt,) is calculated to give the patient an additional security against a recurrence of hemorrhage; inasmuch as it would cut off, not merely the *direct flow* of blood upon the ulcerated artery, but also the *principal anastomotic supply*.

In these remarks, I take it for granted that the hemorrhage in the case described proceeded from a branch of the *external* carotid. They would not, it is evident, apply if the ulcerated vessel were the *internal* carotid: in that case, it is to be feared that nothing would save the patient.

In the present instance, I am inclined to suppose that the ulcerated artery was the *lingual*, for the following reasons: 1. The patient tells me that the soreness in his throat, which he latterly experienced, seemed to him deeply seated within the angle of the jaw; and thus referred to the exact situation of the lingual artery, which, as regards the cavity of the fauces, is singularly exposed and superficial at this part. 2. In a case attended by Dr. Watson, in some respects very parallel to Webb's, where the patient died through hemorrhage into the fauces from ulceration, the artery which bled was proved, by dissection, to be the lingual artery.

This case is described in the third volume of the *Medical Gazette*, page 157. The immediate cause of death was suffocation: the blood, which, in his faint state, the patient could not spit out of his fauces, flowed into the windpipe. The carotid artery being afterwards injected, I made a careful examination of the parts, which are preserved in the museum in Great Windmill street: the adjoined sketch was taken from the preparation. The shaded surface in the figure represents the cavity of an abscess, in which the cornu of the os hyoides lay denuded and carious, and into which the lingual artery, that had been divided by ulceration, opened. The abscess communicated with the fauces through an oval aperture immediately below the tonsil.



Cases similar to the preceding are of rare occurrence. In some the first hemorrhage is fatal; in others, the ulcerated artery, having bled for a time, spontaneously closes, and the bleeding does not recur: in others, the patient is carried off by a return of hemorrhage. In the case of Webb, there can be little doubt that the latter result would have ensued if the artery had not been tied. I believe the case to be the first of the kind in which this operation has been performed: it is extremely gratifying to me to have to state that the practice has proved successful.

I remain, gentlemen,

Your obedient servant,

HERBERT MAYO.

19, George street, Hanover square ;
November 22d, 1829.

HOSPITAL REPORTS.

HOTEL DIEU.

Fracture of the Spine. Symptoms of Compression of the Spinal Marrow. Cure.

INSTANCES of complete cure after fracture of the vertebral column are uncommon. The following case was recently admitted at the Hotel Dieu.

A strong healthy man, æt. twenty-eight, had fallen from the second floor of a house, and fractured the spine, upon a level with the tenth dorsal vertebra. The nature of the injury had been ascertained previously to his admission, and he had been bled four times. Immediately after the accident, the patient was taken up in a state of insensibility; from which, however, he speedily recovered. Symptoms of compression of the spinal marrow, with paralysis of the left inferior extremity, occurred on the second day. The inflammatory symptoms were violent, and they had been opposed by the repeated abstraction of blood, as above mentioned. He was again bled on his admission, on the 3d of September.

4th.—Upon examination, a considerable projection of the last dorsal vertebra, forming a curvature of three inches, the convexity of which was towards the right side, was discovered. The injured parts were examined as tenderly as possible. The left inferior extremity was completely paralysed. It had lost its sensibility and power of motion. The right limb retained its powers, and also the bladder and rectum. The patient was placed in a horizontal position, the loins being supported by a square pillow. He was fixed in bed by a folded sheet placed over his chest, and fastened to the irons of the bedstead. During the night he became delirious and feverish, and a strait-waistcoat was put on. Fourteen ounces of blood were taken away in the morning, and twenty-five leeches were immediately applied in the course of the jugular veins. Strict diet.

5th.—Patient much calmer. He was cupped on each side of the injured part of the back.

7th.—The symptoms of cerebral disturbance have passed off. Pulse less frequent. Left lower extremity still paralysed; bladder and rectum unaffected. He was again cupped near the injury. Light diluents were ordered, and diet as before.

From this time the pulse gradually became natural, and the general condition of the patient encouraging. He was desired to remain perfectly quiet. Light food was allowed.

At the latter end of September, he had almost entirely regained the sensibility of the paralysed limb. The power of moving it was more slowly restored.

October 14th.—He can now move the left limb nearly as well as the right. Sensibility quite restored. When he is placed in a horizontal position, he cannot raise the left heel to a great height. He complains also of some pain in the right hip-joint, but he had experienced this frequently before the accident. The projection of the dorsal vertebra is still evident, but is much diminished: it is only perceptible in the median line.

At the time the case was reported, the patient had not been permitted to leave his bed, although he was very desirous of doing so. His perfect recovery was considered certain.—*La Clinique.*

MILITARY HOSPITAL OF NAMUR.

Case of Intermittent Inflammation of the Conjunctiva, cured by the Sulphate of Quinine. By Dr. FALLOT, of Namur.

A SWISS soldier, of robust constitution, was admitted the 21st of May, to be treated for inflammation of the eye. During his residence at Anvers, he had long suffered from the endemic intermittent fever of the place, and he had also contracted there a violent ophthalmia, which had destroyed the cilia of the left eyelid, and left a speck above the pupil.

On the morning after his admission, there was but little redness or pain of the eye. He was directed to bathe it with cold water. In the evening, the eye was violently inflamed, and very painful; the weakest light could not be endured. His pulse was quick, skin hot, tongue red, and great thirst. He was bled freely from the arm.

For several days the same intermission and recurrence of the symptoms had been observed. About four o'clock in the afternoon the eye began to be painful; the pains increased in severity for four or five hours, and then diminished, and gradually subsided; a copious perspiration at the same time covering the body.

M. Fallot preferred waiting for the occurrence of another paroxysm before he began the quinine, that he might be more certain he had formed a correct opinion from the account given him by the patient. The attack and subsidence of the symptoms took place just as before, and, after the termination of the paroxysm, two grains of the sulphate of quinine were given every hour. By this means the patient was cured. The eye was not again affected, and in a few days he was discharged.—*Journal Complémentaire.*

ST. BARTHOLOMEW'S HOSPITAL.

Case of large Scrotal Hernia, reduced by general means.

JOHN ROSS, ætat. twenty-eight, admitted September 17th, into Powell's ward, under Mr. EARLE, with a large scrotal hernia of the right side. The man states that, two years since, he ruptured himself while lifting a heavy weight. He felt something to give

way at the time, and observed a swelling in the groin, which gradually increased, and descended into the scrotum. For the space of about two years he suffered no inconvenience from the rupture, which was always protruded during the day, and returned again upon his going to rest at night. During this time he never wore a truss. About three weeks before his admission, he found that he was unable to return the hernia as usual. He states that, from this time, the swelling gradually increased in size, the scrotum being much more distended than he had ever observed it to be before; and its friction against the thighs causing him much uneasiness and pain, he was induced to seek relief at this hospital.

When admitted, the scrotum was found to be considerably distended with a hard and inelastic mass, which was supposed to consist of omentum; the testicle could be distinguished at the most inferior part of the scrotum; bowels not constipated. The protruded parts firmly resisted any attempts at reduction by the taxis; and, as there were no urgent symptoms, it was resolved to give the emaciating plan a fair trial, with the view of lessening the bulk of the tumor by reducing the quantity of fat, of which it was thought chiefly to consist. As Mr. Earle expressed it, he would try to convert his fat into *soap*, by the internal exhibition of the liquor potassæ.

The patient was put upon low diet, and the recumbent posture was strictly enjoined. He was ordered to take Liq. Potassæ \mathfrak{mxx} . ter die; and, with the view of assisting the absorbents, the Ung. Hydrargyri was directed to be rubbed in, so as to produce slight ptyalism. The good effects of the treatment were in a short time manifest, and at the end of five weeks the plan had succeeded perfectly. The hardened omentum gradually softened and decreased in bulk, until it was entirely reduced. The neck of the sac was felt to be considerably thickened.

October 24th, he was ordered to have a truss, and discharged on the 27th.

Luxation of the Thigh-bone upwards and forwards on the Pubes.

MARY HINDS, ætat. sixty-three, was admitted into this hospital, October 19th. She said that she slipped down stairs and fell on the right hip, with the leg under her. The dresser was not able to ascertain exactly the nature of the accident, but recognised the head of the bone, which obeyed the motions of the limb, in the groin. Mr. VINCENT saw her on the 20th, and showed the case to Messrs. LAWRENCE and EARLE, when it was decided to have a dislocation upwards.

On examining the limb, it appeared about two thirds of an inch shorter than the other; the toes everted and pointed downwards, so as not to allow the heel to reach the ground; the knee was also everted; the heel and knee could be brought close to the opposite

limb; the femur was not bent either backwards or forwards with regard to the pelvis, and could easily be flexed to a right angle with the pelvis; *it could not be rotated inwards*, and but slightly outwards; by using a slight extension, the limb could nearly be brought down to its original length; the hip was flattened externally. Situation of the head of the femur, upon and rather to the pubic side of the inferior, anterior, spinous process of the ilium, having no muscle between it and that process; in front, and covering that part of the head nearest the neck, was the origin of the rectus muscle that arises from the inferior spine; externally and laterally, the origins of the sartorius and tensor vaginæ femoris, which crossed the neck; on the pubic side, and rather in front, were the iliacus internus and crural nerve; the psoæ muscles and vessels still more internally; above was the crural arch; the origin of the rectus appeared the chief obstacle to still greater shortening of the limb. There was no pain or numbness from the pressure on the nerve when the limb was at rest.

Reduction was first attempted without the assistance of pulleys, the woman lying on her back, and extension made in a line with the body; but, as this plan did not succeed, she was placed on the sound hip (the left), and the pulleys applied, using extension in a direction posterior to the body. Mr. Earle at the same time pressed down the head of the bone, by which means the reduction was effected in eight minutes.

The age of this woman caused suspicion of fracture of the neck of the bone. The limb was not in this case flexed either backwards, as mentioned by Boyer, or forwards, according to Sir A. Cooper's authority, by reason of the small size and weakness of the muscles of the patient. The only diagnoses between this accident and fracture of the neck, were protuberance in the groin obeying the motions of the limb, and inability to rotate the limb inwards.

Two similar accidents have occurred at the Manchester Infirmary within the four last years, the latter within ten months: in both of these the thigh was flexed on the pelvis. Another case was recently admitted into an hospital in Dublin.—*Med. Gazette.*

GUY'S HOSPITAL.

*Malformation of the Genitals—Hermaphroditism.**

AN individual exhibiting this unfortunate irregularity of structure was admitted into the Charity ward, September 39th, under the

* The term "hermaphroditism" may be justified in its application to such cases by common parlance, but it is misapplied. An hermaphrodite implies a non-natural creature, capable of performing the generative functions of both sexes. In these instances the individual can perform neither the sexual duties of man or woman. No well authenticated case of human hermaphroditism, in the proper acceptation of the term, has ever been recorded. It is true there is no danger, in the present day, of our following the custom of the Athenians and Romans, of destroying reputed hermaphrodites; but it is incumbent upon us, as men of science, to correct, not to adopt, the popular abuse of words.—

EDITORS.

care of Dr. BRIGHT. She was then suffering under a severe form of fever, which rendered her constantly delirious, and in a few days proved fatal.

On her admission,* and more especially when, in order to apply a blister to her head, it was exposed and shaven, every one was struck with the coarse and masculine expression of her countenance: this, and her somewhat square and muscular figure, were all the observations relating to her sex that were made during life; but the post-mortem inspection disclosed the following appearances:

A body analogous to the penis was observed immediately beneath the pubic arch, not free or pendant, but bound down towards the perineum: its length was about two and a half inches, and it terminated in a somewhat bulbous extremity, a little like the glans, but without the usual delicacy of cutaneous organization, without any perforation for the urethra, and without a prepuce. On each side of this body there was a considerable fulness of the integuments, at first view resembling the female labia, but in reality analogous to the male scrotum, as, like it, they each contained a small testis. This separation, into its two halves, of the scrotum, depended on the penis being bound down in the median line, as previously described. The testes were in size like those of a boy six or eight years old, and were connected with vasa deferentia, which were found pervious, and considerably enlarged towards their termination. The vesiculæ seminales were very small; the prostate gland also was remarkably small, and was covered on its sides by a pair of peculiar muscles passing from the rectum to the neck of the bladder. The urethra terminated in the perineum, about one inch from the end of the supposed penis; and half an inch farther there was a blind opening, which fancy might call the rudiment of a vagina, but which was probably nothing more than an enlarged lacuna. The tunica vaginalis was continued some distance up the cord, but at the ring was quite closed. There was a very minute trace of cremaster muscle. The pelvic viscera had no female character whatever, and the formation of the pelvis itself approached to the male rather than to the female standard. The mammæ were considerably developed, but would have been thought small for a healthy female. The lips and chin were clothed with a few scattered, irregular, curling hairs, not more than are often seen on aged females. The outline of the figure, in its muscular developement, squareness, and largeness of limbs, &c. was decidedly more male than female. The cerebellum was natural in structure, and, if it differed at all from the usual developement, was rather small, but this was by no means distinct. No other peculiarities, either diseased or congenital, were observed in any part of the body.

* Speaking of her as a patient, we adhere to the sex then assumed. She was admitted as Mary Cannon, æt. fifty-five or sixty.—*Med. Gaz.*

It appears that, in the former part of her life, this hybrid had assumed the dress and habits of a man; at one time working in a brickyard, at another acting as a groom; then as a milkman; and afterwards she kept a green-grocer's shop. Her habits and manners were rude and bold, sometimes indicating a degree of derangement; more than once she engaged with success in pugilistic encounters; and it is said manifested still less equivocally male propensities. For the last seven or eight years she has appeared as a female, calling herself Mary Cannon; and it is odd enough that she first sustained her new sex at a public-house, called "The World turned upside down," where she engaged herself as "maid of all work." She was not, however, fully received by her female fellow-servants as one of them; suspicion hung about her, and care was always taken to provide for her a separate bed.—*Ibid.*

WESTMINSTER HOSPITAL.

Large Tumor in the Calf of the Leg.

AMELIA BECKETT, æt. fifty-seven, admitted November 3d, 1829, with a very large tumor occupying the whole of the calf of the leg, and measuring in the centre seventeen inches and two eighths, being nearly three times the size of the other leg. She says that she was a stout healthy woman till within the last two years, when the tumor first made its appearance. She is now much emaciated, and has a very troublesome cough, accompanied by mucous expectoration. She first perceived a small lump in the left ham, which was very hard and painful, but did not, as far as she recollects, pulsate. When it was about the size of her double fist, a lancet was pushed into it, but nothing came out except a little blood. The tumor went on increasing, and her health gradually failing, till the present time. About a month after the opening of the tumor, she felt a tingling pain in the fore part of the sole of the foot, extending to her toes, which became so violent as to prevent her putting her foot to the ground. There was pain also extending from the outside of the leg, in the course of the fibular nerve, to the instep and anterior part of the foot. The skin over the calf of the leg is much on the stretch, and all the cutaneous veins are greatly enlarged. On the inside of the tibia, the tumor is softer than at any other part, colourless, and yielding an elastic springy feel, though not that of fluctuation; the same sensation is discovered at the back part, about where the heads of the gastrocnemius unite. No pulsation could be discovered by the ear, or by the stethoscope, unless when applied over two large arterial branches, which ran superficially over the back part of the gastrocnemius. There is general œdematous swelling of the leg and foot.

Mr. GUTHRIE observed that, although it resembled in some respects a diffused aneurism, still he did not believe it to be one,

he considered it to be either a fungoid or anomalous tumor; and that, although he did not think amputation would save the woman's life, it was the only thing that offered her a chance. In this opinion Messrs. LYNN, CARLISLE, and WHITE, having fully concurred, the operation of amputation of the thigh was performed on Saturday, the 7th of November.

Mr. Guthrie said, before he commenced the operation, that he never applied the tourniquet when he had an able assistant to compress the artery against the pubes, (which Mr. HARDING had in the present instance undertaken,) inasmuch as it gave a great facility in the performance of the operation, saved a great deal of time, and was usually attended by less loss of blood than when the tourniquet was applied; and that he never used one unless he had bad assistants.

The thigh was amputated by Mr. Guthrie in *eighty seconds*, the first incision passing through the integuments and fascia, which allowed of their being retracted with the greatest facility, and without any dissection; a method of proceeding which, he said, he had first introduced, and which was of the greatest importance in regard to the saving of time and of pain to the patient. Two ligatures only were applied, one on the femoral artery, the other on the long descending branch of the external circumflex. Very little blood was lost. The woman bore the operation remarkably well.

On dissection of the limb, it was found that the tumor originated from the fascia covering the deep-seated muscles of the leg: it was cartilaginous and lardaceous to an inch and a half, or more, in thickness, containing within a matter partly pultaceous, partly of a curdy or cheesy texture; the pultaceous part being principally situated where the elastic feel was distinguishable previously to the operation. The posterior tibial and peroneal arteries were obliterated; the anterior tibial was given off at the usual place, and several large arteries ran down the back of the leg, external to the tumor. A cast of the dissected limb is preserved at the hospital.

The woman went on tolerably well for several days, and hopes were entertained of her recovery; but febrile symptoms and cough gradually increasing, she died exhausted on the 21st, fourteen days after the operation.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

Report of some particular Cases, treated by different Methods, at the Royal Westminster Ophthalmic Hospital.

To the Editor of the London Medical and Physical Journal.

SIR: You were pleased to express a desire to have the particulars of the first of the following cases sent to you, on seeing her the day she presented herself, (October 27th)

conceiving, as you then said, that it was next to impossible her eyes could be saved. I have added, by desire of Mr. GUTHRIE, five others, illustrative of different modes of treating similar diseases; and have the honour to be, sir,

Your obedient servant,

J. R. TAYLOR, *House-surgeon.*

November, 1829.

CASE I. Catherine Bulkley, æt. thirty, applied October 27th, under the following circumstances: Has been subject to lippitudo for several years; a month ago was attacked by inflammation of the ball of the right eye, accompanied by swelling of the lids, pain, and great discharge. These symptoms continued for about a fortnight, when the inflammation subsided for five or six days, the discharge continuing; the inflammation then returned, and has been since increasing in violence. A week ago the left eye also became inflamed. She has had a gonorrhœa for more than a month. Both eyes are greatly inflamed; there is great chemosis of the ball, encroaching upon the edge of the cornea, together with superficial ulceration, and some degree of loss of transparency of that part; considerable purulent discharge; great pain in her head and eye; discharge scalding hot.

The nitrate of silver ointment was immediately applied to both eyes by Mr. Guthrie himself, in order, to ensure its proper application in a case of so much importance to the patient, whose eyes were in the utmost danger. He also directed her to be cupped to eight ounces on each temple. No internal medicine to be given; but to attend at his house at ten o'clock the next morning.

28th.—The disease is arrested; she is something better in every respect.

29th.—Can open her eyes and see her way, and says that she is considerably better. The ointment applied, and to be cupped to twelve ounces.

31st.—Continues improving: chemosis, pain, and purulent discharge, considerably less. Having no settled home nor means of subsistence, Mr. Guthrie sent her to-day to the Westminster Hospital.—The ointment applied.

November 2d.—Better. Ointment repeated.

7th.—The chemosis has disappeared; eyes considerably better, but she complains of pain in the left side of her head, and is ordered to be cupped to eight ounces behind the ear.—Haustus Inf. Sennæ cum Sulph. Magn.

9th.—Discharge ceased, and the inflammation of the ball of the eye nearly gone; says that her headach is not better, and thinks it arises from want of more food.—Ordered half diet. Rep. Ung.

11th.—Says that the half diet has cured her headach, and is supposed to be afraid of being discharged the hospital.—Infus. Sennæ omni mane.

16th.—Ordered to be discharged at the end of the week, and to take some of the Ung. Hydrarg. Nitr. dil. to apply to the edges of the lids for the lippitudinous affection.

Case kept by Mr. JAMES.

CASE II. Wm. Smith, æt. fifty, admitted August 25th, 1829. Has been attending at the hospital since the above date, for an amaurotic affection of his right eye. Three days ago, however, this eye was attacked by inflammation, accompanied with severe pain.

November 14th.—The conjunctiva is now very much inflamed, and there is very great chemosis; so much so, that the cornea is partly concealed. Lids are also inflamed, and very much swollen; and there is a great discharge of water from the eye. He complains of pain in his forehead and eye.—Cucurb. cum ferro ad ʒi. Pulv. Jalapæ comp. ʒi. statim.

17th.—Still complains of pain; chemosis and great swelling of the lids not much diminished.—Eighteen ounces of blood to be taken immediately from the temporal artery. The Ung. Argenti Nitratis to be applied forthwith. Emplast. Canth. pone aurem hora somni. Capiat Calomel gr. vi. nocte. Magn. Sulph. ʒi. mane.

18th.—Says he felt pain for half an hour after the ointment was applied, but is much better this morning.—Warm fomentation.

19th.—Improving.

21st.—Is much better; chemosis subsiding fast. The eye is out of danger.—Repeat the ointment.

Case kept by Mr. RICHARDS.

CASE III. Mary Ann Price, æt. fourteen, admitted November 10th, 1829. Five days ago she began to feel pain in her left eye, extending to the temple, accompanied by increased lachrymation. There is acute inflammation of the conjunctiva, with great chemosis; cornea clear; iris healthy. Pulse quick, skin hot, tongue furred, bowels confined.—To be cupped to ʒviij. Appl. Ung. Arg. Nitr. Pulv. Jalapæ c. ʒss.

12th.—Says that her eye was easier yesterday than it is to-day. The inflammation and chemosis appear much the same as on the 10th. Bowels have not been opened.—Rep. pulv. et Unguent. Arg. Nitr.

14th.—The chemosis a little diminished.—Rep. Unguent. Pil. Hydr. cum Cambog. gr. x. nocte. Magn. Sulph. ʒss. mane.

17th.—The left eye is much better; but the right was attacked on the 15th, and is now more inflamed than the left.—The ointment of the oxymuriate of mercury to be applied to the right eye, and the nitrate of silver ointment to the left as before.

21st.—Was so much better on the 19th that she did not come to the hospital. The right eye was more benefited by the oxymuriate ointment than the left by the Ung. Arg. Nitr. Both are out of danger.—To continue the ointment to each eye respectively.

Case kept by Mr. DAVIS.

CASE IV. James Halfacre, æt. thirteen, admitted November 13th, 1829, with ulceration of the cornea of both eyes.

The left eye became inflamed some weeks ago, and the right a few days after. He has had leeches and lotions applied, but both eyes have been gradually getting worse, and now there is a very large ulcer, nearly occupying the whole of the cornea of the right eye, but it has not yet opened into the anterior chamber; there is great inflammation of the conjunctiva of the ball and lids, which are also thickened. The right eye is not so much inflamed, and the ulcer in the cornea is smaller. He says that he suffers very little pain in his eyes, and none whatever in his head; yet he cannot bear the light without suffering great pain, and, when the lids are raised, a quantity of water runs from the eyes.—To lose six ounces of blood from the left temple, and to have the nitrate of silver ointment applied to both eyes.—*Pulv. Jalapæ c. ʒi. cras mane.*

15th.—Better. The inflammation in both eyes abated, and the ulcer in the left cornea does not appear to have spread.—*Empl. Canth. pone aurem sinist.*

17th.—The inflammation of the conjunctiva of the right eye has very much diminished; the cornea is clearer, and the ulcer healing. The left eye is also less inflamed. The blister rose very little.—*Rep. Applic. Ung. Arg. Nitr. singulo oculo.*

19th.—*Repetatur Ung. Pergat.*

21st.—Right eye nearly well, very little inflammation remaining; ulcer nearly filled up. The left eye is also better; ulcer much less, and the inflammation of the conjunctiva considerably diminished. He is now able to see distinctly with his right eye, which, from the inflammation and ulceration of the cornea, he could not do when he first came to the hospital.—*Rep. unguent.*

This case is still under treatment, and is one of the most remarkable of those in which the new method of treatment has been tried; the child having got regularly worse during seven weeks, until it was adopted.

Case kept by Mr. TAYLOR.

CASE V. Emma Hay, æt. fifteen, admitted October 27th, 1829. There is an extensive ulcer of the cornea of the right eye, the whole of the cornea being opaque. Acute inflammation also of the cornea, which has a zone of red vessels surrounding it. She has been ill for three years, but of late the ulcer and opacity have much increased. She has been bled and leeches repeatedly, with very little relief, and has had various applications to the eye. Is now quite unable to distinguish any object with the right eye, and complains of intense pain in the eye and forehead. Great intolerance of light and constant lachrymation. Bowels generally confined; tongue white; pulse quick, and rather full. The sclerotic coat of the left eye is a little inflamed, and there is also an appearance of chronic inflammation of the conjunctiva of the tarsi of that eye.

October 27th.—Applic. Ung. Argent. Nitratis oculo dextro.—R. Pulv. Jalapæ comp. ʒi. statim sumend.

29th.—The inflammation and opacity of the cornea is much less to-day, and the vascularity is much diminished. She says that, in six hours after the first application of the ointment, the pain in the eye and forehead ceased, as did also the intolerance of light. To-day there is scarcely any lachrymation. She observes that her eye has not been so easy and free from pain for the last three years as it is to-day.—Rep. Ung. Argent. Nitratis et Pulv. Jalapæ c. ʒi.

Nov. 2d.—The zone of red vessels surrounding the cornea has quite disappeared, and the ulcer and opacity are rapidly lessening. Eye perfectly free from pain and lachrymation.—Rep. Ung. Argent. Nitratis. Rep. pulv.

Nov. 5th to 18th.—Rep. unguent.

Since the last report, the opacity and ulceration of the cornea have gradually and entirely disappeared. She is now able to see perfectly well with both her eyes, and there remains no trace of disease.

Discharged, cured.

Case kept by Mr. RICHARDS.

CASE VI. Thomas Maize, æt. one year and a half, admitted November 17, 1829, with muco-purulent ophthalmia.

For the last three weeks the child has had a slight discharge of matter from both eyes, attended with external discoloration of the lids, which were also inflamed. Not much apparent inflammation of the ball. For this simple washes were used. Until yesterday morning, the disease rapidly increased in intensity, the lids being much swollen and discoloured, and entirely closing up the eyes. Discharge also much increased in quantity, and of a more yellow appearance. On separating the lips, the corneæ appeared transparent, conjunctiva of the ball being much injected and tumefied. Bowels not open.—Appl. Ung. Nigr. ad oculum dextrum. Ung. Hyd. Oxym. ad oculum sinistrum. Lotio Aluminis ter quater die utend. Pulv. Alter. i. omni nocte et mane sumend.

17th.—The child's mother states that, within an hour after the application of the ointments, it opened its eyes, and was enabled to keep them open all day. Very little inflammation remains of the ball; much more on the lids; not much discharge at present; lids are not swollen. Bowels freely open.—Rep. lotio et pulv.

19th.—Cured.

Case kept by Mr. FOOTE.*

[To be continued.]

* Professor Graefe strongly recommends the application of a concentrated solution of nitrate of silver in cases of chronic ophthalmia with great purulent secretion. (*Rapport. sur l'Institut. Chir. et Ophthal. de Berlin.*)—EDITORS.

CRITICAL ANALYSES.

Que laudanda forent, et que culpanda, vicissim
 illa, prius, cretâ; mox hæc, carbone, *notamus*.—*PERSIUS*.

On the Nerves of the Face. Being a second Paper on that subject,
 by CHARLES BELL, F.R.S. (*Philosophical Transactions*, May
 1829.)

THE publication of this essay gives us an opportunity of reviewing the principal experimental inquiries which have been made during the last few years into the functions of the nerves considered as organs of consciousness. The object which we have in view is to explain not merely *what* has been done, but *to whom* the credit of each discovery is attributable. It must be instructive, and may even be amusing, to trace the progressive steps by which the body of knowledge which we now possess has been gradually unfolded.

It cannot be necessary to inform our readers that the authors of the modern physiology of the nerves are BELL, MAGENDIE, and MAYO: the first well known for his fertile invention, ingenuity, and talent; a brilliant and successful lecturer, who claims, in the history of these discoveries, the first place and mention, from having, as we shall show, originated the experimental inquiries out of which has grown our present knowledge. The second celebrated throughout Europe for the boldness and originality displayed in his experiments on living animals. The third, whom it is to praise most highly to say that he bids fair, as a practical surgeon, to equal the reputation which he early acquired as an anatomist and physiologist. Let us proceed to examine what each in his turn has done. The meed which we have to give to each amounts to no inconsiderable distinction, and by us it will most assuredly be allotted with strict fidelity and justice.

More than twenty years ago, Mr. BELL devoted himself to the study of the brain and nerves. He printed, and circulated amongst his friends, a tract which is now lying before us, entitled "*Idea of a New Anatomy of the Brain.*" In this work Mr. Bell states, as his *then* opinion, that the cerebrum, with the anterior half of the spinal marrow, and the anterior roots or fasciculi of the spinal nerves, are the organs of consciousness, of thought, feeling, and volition; that the cerebellum, the posterior half of the spinal marrow, and the posterior roots or fasciculi of the spinal nerves, regulate the secret, organic, or automatic functions of the

body, secretion, growth, the sympathies of parts, and the like. We extract the following passages to prove that we have correctly represented Mr. Bell's *then* opinion.

"The medulla spinalis has a central division, and also a division into anterior and posterior fasciculi, corresponding with the anterior and posterior portions of the brain. Further, we can trace down the crura of the cerebrum into the anterior fasciculus of the spinal marrow, and the crura of the cerebellum into the posterior fasciculus."*

"The cerebellum, when compared with the cerebrum, is simple in its form. The medullary matter comes down from the cineritious cortex, and forms the crus; and the crus runs into union with the same process from the cerebrum, and they together form the medulla spinalis, and are continued down into the spinal marrow; and these crura, or processes, afford double origins to the double nerves of the spine.

"The nerves proceeding from the crus cerebelli go every where, (in seeming union with those from the crus cerebri); they unite the body together, and control the actions of the bodily frame, and especially govern the operation of the viscera necessary to the continuance of life.†

"The cerebrum I consider as the grand organ by which the mind is united to the body. Into it all the nerves from the external organs of the senses enter; and from it all the nerves which are organs of the will pass out.‡

"The secret operations of the bodily frame, and the connexions which unite the parts of the body into a system, are through the cerebellum and nerves proceeding from it."§

The partial experimental proof which Mr. Bell adduced in support of the preceding views, is the following:

"I found," says Mr. Bell, "that injury done to the anterior portion of the spinal marrow convulsed the animal more certainly than injury done to the posterior portion; but I found it difficult to make the experiment without injuring both portions.

"On laying bare the roots of the spinal nerves, I found that I could cut across the posterior fasciculus of nerves, which took its origin from the posterior portion of the spinal marrow, without convulsing the muscles of the back; but that, on touching the anterior fasciculus with the point of the knife, the muscles of the back were immediately convulsed."||

The preceding extracts agree in substance with the views which Mr. Bell was accustomed to deliver in his lectures at Windmill street, about 1813 and 14. These views have, indeed, been proved to be erroneous, but the critical historian of the physiology of the nervous system will still

* *Idea*, &c. p. 21.

† *Ibid.* p. 26.

‡ *Ibid.* p. 27.

§ *Ibid.* p. 36.

|| *Ibid.* p. 22.

give to Mr. Bell the honour of having made the *first* experiments upon the double roots of the spinal nerves. What he observed in these experiments, he observed justly; but, although it was the truth, it was not the *whole* truth. The evidence which he elicited from his interrogation of nature was faithful as far as it went; but it was partial, and it was incomplete, and therefore he was led to false conclusions. The subject now slept for a while.

In 1821 Mr. Bell published, in the *Philosophical Transactions*, his splendid and elaborate theory of the "super-added" or "respiratory" nerves. In the ingenious essay to which we now refer, it is easy to distinguish the strong facts upon which Mr. Bell founded his theory, from the slighter instances which he trained and bent towards its support. The view which he had taken was the following:

The muscles of the face, that is to say, the nasal, labial, and palpebral muscles, receive nerves from two sources, viz. the 5th cerebral nerve, and the 7th. Muscles elsewhere in general receive nerves from one source alone, either *e.g.* from a cervical, a dorsal, a lumbar, or a sacral nerve. Now, of the two sets of nerves distributed to the muscles of the face, one, namely the 5th, had been long observed to resemble in its mode of origin the spinal nerves. It was probable, therefore, that the 5th serves in the face the same purpose as the spinal nerves in other parts. But the spinal nerves in other parts minister equally to sensation and voluntary motion. Hence it followed that the facial branches of the 5th are probably nerves of sense and voluntary motion jointly.

But what office, then, was to be attributed to the facial branches of the 7th? Let us look, the physiologist said, to the endowments of the muscles of the face, and ascertain whether they enjoy any property superadded to those which muscles elsewhere exhibit. Such a superadded endowment Mr. Bell supposed that he found, in the change of feature expressive of emotion, in the play of the nostrils in breathing, in the motion of the lips, and nose, and eyelids, in laughing and sobbing: in other words, in those movements of the features which are usually called instinctive, as opposed to such as are premeditated. And Mr. Bell concluded that the portio dura of the 7th (the superadded or respiratory nerve of the face, as he termed it,) was placed for the purpose of transmitting the instinctive impulse to muscles, already supplied with sentient and voluntary nerves from other sources, namely, from the facial branches of the 5th. Mr. Bell then proceeded to put this most

original and ingenious conjecture to the test of experiment. The following are his words:

"An ass being thrown, and its nostrils confined for a few seconds, so as to make it pant and forcibly dilate the nostrils at each inspiration, *the portio dura was divided on one side of the head*: the motion of the nostril on the same side instantly ceased, while the other nostril continued to expand and contract in unison with the muscles of the chest. On the division of the nerve, the animal gave no sign of pain; there was no struggle nor effort made when it was cut across. The animal being untied, and corn and hay given to him, he ate without the slightest impediment.

"An ass being tied and thrown, *the superior maxillary branch of the fifth nerve was exposed*. Touching this nerve gave acute pain. *It was divided*, but no change took place in the motion of the nostril: the cartilages continued to expand regularly in time with the other parts which combine in the act of respiration; but the side of the lip was observed to hang low, and it was dragged to the other side. The same branch of the 5th was divided on the opposite side, and the animal let loose. He could no longer pick up his corn; *the power of elevating and projecting the lip, as in gathering food, was lost*. To open the lips the animal pressed the mouth against the ground, and at length licked the oats from the ground with his tongue. The loss of motion of the lips in eating was so obvious, that it was thought a useless cruelty to cut the other branches of the 5th."*

"From these facts," continues Mr. Bell, "we are entitled to conclude that the portio dura of the 7th is the respiratory nerve of the face; that the motions of the lips, the nostrils, and the velum palati,† are governed by its influence, when the muscles of these parts are in associated action with the other organs of respiration."‡

"We have proofs equal to experiments that, in the human face, the actions of the muscles which produce smiling and laughing, are a consequence of the influence of this respiratory nerve. A man had the trunk of the respiratory nerve of the face injured by a suppuration which took place anterior to the ear, and through which the nerve passed in its course to the face. It was observed that, in smiling and laughing, his mouth was drawn in a very remarkable manner to the opposite side."§

"*In the individual whose face was paralysed on one side during the excited state of the respiratory organs, there could be observed no debility or paralysis in the same muscles when he took a morsel into his mouth and began to chew.*"||

* Phil. Trans. 1821, p. 413.

† Mr. Bell is mistaken in supposing that the portio dura gives any branches to the velum palati.—REV.

‡ Phil. Trans. p. 414.

§ Ibid. p. 416.

|| Ibid. p. 417. At the bottom of this page is a curious instance of a fact unintentionally bent to suit a theory. Mr. Bell observes, that touching the

The brilliant theory which we have thus illustrated was generally received as a most important addition to our physiological knowledge. The late Mr. SHAW went to Paris to communicate with M. MAGENDIE upon it, and to repeat the experiments upon which it was founded. M. Magendie speaks thus of the division of the 7th nerve, in reference to Mr. Bell's views :

"It remained to ascertain if the muscles to which this nerve is distributed were entirely paralysed on its division, or whether they remained still capable of performing some actions. It appeared that the act of mastication could still take place. In fine, it appeared that nothing was disturbed by the division of the portio dura but the consent of the muscles of the face with the other muscles of respiration."

M. Magendie continues,

"We have repeated these experiments at the veterinary school at Alfort, with Mr. Shaw and M. Dupuy, and the result which we have obtained agrees perfectly with that which we have related, excepting as regards the influence of the infra-orbital nerve on mastication; an influence which was not evident to us."*

In this criticism Magendie was in error. Mr. Bell was right in stating that, when both infra-orbital nerves are divided, the animal *does not* use its lips (*it seems that it cannot,*) in taking food. The experiment, however, is more satisfactory when the inferior maxillary nerves are cut as well: that is to say, when the branches of the 5th which supply the under lip are divided, as well as those which supply the upper lip.

The reader will observe that, in speaking of mastication in the preceding extracts, Mr. Bell meant to express only *the action of the lips and cheeks* in manducation, not that of the jaws, to the muscles of which no branch of the 7th is distributed, nor any nerve, indeed, that was divided or implicated in the preceding experiments.

In the midst, however, of the extensive and early celebrity which this theory obtained, it appears that some doubts were entertained by one physiologist of its correctness. Mr. MAYO was induced to consider the original reasoning upon which this theory was founded, fallacious, and the experiments by which it was supported, incomplete and inconclusive.

7th nerve in the ass convulsed the muscles of the face; but that, "by means of the branches of the 5th, it was more difficult to produce any degree of action in the muscles." The fact is, *it is impossible*. Irritation of the facial branches of the 5th produces no action in the muscles they supply.—REV.

* Magendie, Journ. de Physiologie, tome i. p. 387.

Mr. Mayo observed, that the muscles which have "respiratory or superadded nerves" distributed to them, are not the only muscles which seem to have two endowments. The whole frame is susceptible, although in a less degree, of instinctive excitation, as well as the countenance and throat. The muscles of the jaws, especially, which have almost as much to do in instinctive action as the muscles of the face, have no superadded nerve given to them. In other words, Mr. Mayo saw no reason why the muscles of the face, and chest, and throat, should be thought to require an additional class of nerves. He therefore proceeded to examine, patiently and rigorously, the experiments which went to establish what he surmised to be a wrong conclusion. He observed that Mr. Bell had divided the portio dura *on one side alone*, in the experiment from which he deduced that it influenced breathing, but not the prehension of food. Mr. Mayo coupled with this observation the fact that the orbicular muscle of the lips, by which the ass takes its food into the mouth, is equally supplied by the nerves of *both sides* of the face. It did not, therefore, Mr. Mayo observed, necessarily follow that, when *one portio dura alone* was divided, the endowment which the orbicular muscle of the lips retained was derived (as Mr. Bell thought) from the 5th nerve of the same side. It was equally likely that the result depended upon the influence of the undivided portio dura of the *other* side. But let Mr. Mayo speak for himself, and describe his own experiments.

"The portio dura was divided (in an ass) *upon both sides*. The lips immediately fell away from the teeth, and hung flaccid, and the nostril lost all movement. The muscles of the lips and nostrils seemed thoroughly paralysed.

"The infraorbital and inferior maxillary branches of the 5th (in another ass) were divided on either side, where they emerge from their respective canals. The lips did not lose their tone, or customary apposition to each other and to the teeth, but their sensibility seemed destroyed. When oats were offered, the animal pressed his lips against the vessel which contained the food, and finally raised the latter with its tongue and teeth. On pinching with the forceps the extremities nearest the lips of the divided nerves, no movement whatever of the lips ensued.

"I infer from the preceding experiments,* that, in the ass, the portio dura is a simple nerve of voluntary motion, and that the frontal, infra-orbital, and inferior maxillary nerves, are nerves of sensation only, to which office that branch of the 5th which joins

* It would have been unnecessary to quote the whole of these experiments. They were repeated and varied, but always with the same result.—RAY.

the portio dura probably contributes; and, from preceding anatomical details, that other branches of the third division of the 5th are voluntary nerves to the pterygoid, the masseter, the temporal, and buccinator muscles."*

Thus was overthrown, in its strongest hold, the theory of the respiratory nerves, and a new and simple view substituted and demonstrated. Mr. Bell had taught that the infraorbital and inferior maxillary branches of the 5th are for sense and voluntary motion; the facial branches of the 7th for the transmission of an instinctive impulse.† Mr. Mayo proved that the facial branches of the 5th, above named, are exclusively nerves of sense; the facial branches of the 7th, the exclusive and common nerves of motion.‡

One point, we see, has escaped our notice. How happens it that, when the labial branches of the 5th are alone divided, the animal does not use its lips in taking food? Mr. Mayo, in the essay which we have just quoted, most happily and satisfactorily resolved this difficulty. He pointed out that the fact adverted to is a necessary consequence of the loss of sensation in the lips; referring his readers to the history of cases of anæsthesia, in which a parallel phenomenon is uniformly recorded. When a person has lost sensation in his hands (their muscular power remaining,) they are useless to him, unless he directs another sense to guide and regulate their efforts: as long as a patient thus afflicted looks at what he sustains in his hand, so long the object is secure; the instant that he turns his head away, the object drops from his grasp. No muscular effort can be sustained without a sense to guide it.

* Mayo's Anatomical and Physiological Commentaries, Part I. p. 112.—London, 1822.

† Suppose a writer, in describing the circulation, were to adopt the phrase of "the vessels which convey the blood from the heart to all parts of the body;" should we not be justified, to avoid such unnecessary circumlocution, in inferring and asserting that he meant the *arteries*? Mr. Bell mentions all those actions which must be deemed *instinctive*, but prefers avoiding the use of this term, which we, as we think, more philosophically, employ.—REV.

‡ In looking carefully over Mr. Bell's first essay upon the Nerves, (Philos. Trans. 1821, p. 418.) we find the following passage, which, *taken alone*, would seem to show that he thought one division of the 5th nerve merely a sentient nerve; the 7th, in that region, an exclusively motor nerve. Coupled, however, with the context, it is evident that the facts which we have to quote, if difficult to be reconciled to his theory, did not tend to shake his faith in it. "I divided," says Mr. Bell, "the branch of the 5th pair which goes to the forehead, in a man, at his urgent request, on account of the tic douloureux: there appeared no paralysis of the muscles of the eyebrow. But, in an individual where an ulcer and abscess, seated anterior to the tube of the ear, affected the superior branch of the respiratory nerve, the eyebrow fell low, and did not follow the other, when the features were animated by discourse or emotion."

Such are the conclusions at which Mr. Mayo arrived, in the researches which he set on foot avowedly in order to sift the theory proposed by Mr. Bell; and these conclusions of Mr. Mayo's, Mr. Bell has subsequently published as his own, having, as it appears to us, substantially abandoned his theory of the respiratory nerves,* and adopted a truer view, without (we regret to say,) acknowledging to whom he is indebted for the correction.

The next step in the history of these inquiries is the discovery by Magendie of the functions of the double roots of the spinal nerves. In the autumn of 1822, Magendie published, in his *Physiological Journal*, the details and results of his decisive experiments. He divided the *posterior* roots of the spinal nerves in a young animal; upon which, sensation was found to be lost, while the power of motion remained. He divided the *anterior* roots in another: motion was lost, but feeling remained. Thus Magendie proved the anterior roots or fasciculi of the spinal nerves to be voluntary or motor nerves, and the posterior fasciculi to be nerves of sensation. We attribute this great discovery entirely to Magendie.† It is childish in any other physiologist to advance a claim to it; and, although the pupils of Mr. Bell and Mr. Mayo may take pleasure in tracing how near each of these physiologists had approached to the discovery, we, with the caution of practised critics, look only to the date of the respective publications, in which each new fact is announced; and allot to each author, according to *that date*, his claim to originality.

Pursuing this method, the next experiment upon which we fall is the following by Mr. SHAW. Mr. Shaw divided the 5th nerve immediately after its exit from the cranium. He found "that, upon this, the jaw fell, and that the mus-

* See Mr. Bell's Summary of the Uses of the Nerves. *Phil. Trans.* 1823, p. 300.

† "While referring to matters of alleged plagiarism, M. Magendie being accused, as well as Mr. Mayo, of this offence, it may perhaps assist the cause of the former, if I were to state the fact that, on the 2d September, 1822, M. Magendie informed me, while sitting beside him at a séance of the Institute in Paris, that he had recently found by experiments (very difficult to adopt) that, the anterior roots of the spinal nerves being divided, the parts supplied by these nerves lost their powers of motion, and retained their sensibility; and that, when the posterior roots were divided, the parts supplied by these nerves lost their sensibility, but retained their motion. As to the question of M. Magendie's originality, and Mr. Bell's priority in the discovery of the separate functions of the spinal columns and nervous roots, I will not venture to give any positive opinion. M. Magendie's communication appeared to me, at the period quoted, to be new as far as it went, although I was aware that Mr. Bell had paved the way to the important facts becoming developed of the separate functions allotted to different portions of the nervous system."—*Extract from Mr. Broughton's Letter, Med. Gazette, June 6, 1829.*

cles of that side were powerless."* To this experiment we are not inclined to attach much value. Mr. Mayo had *previously* made the observation, that the branches of the 5th distributed to the muscles of the jaws *must* be motor nerves, inasmuch as the muscles of the jaws receive nerves from no other source. But our late much respected friend, Mr. Shaw, in the essay in which his experiment is published in this Journal, appears to us to have seen *beyond the facts* which his experiment proved. He certainly compares the 5th to the spinal nerves with more precision than Mr. Bell had done. But, on the other hand, it must be admitted that he no where states, in so many words, *what part* of the muscular branches of the 5th he supposes to be fasciculi of motion, or voluntary nerves.†

Upon *this* inquiry Mr. Mayo, it appears, was bent at the time when Mr. Shaw made the experiment which we have described. "Towards the close of last summer," observes Mr. Mayo, in the second part of his *Anatomical Commentaries*, published in July 1823, "I endeavoured to trace the final distribution of the ganglionless portion of the 5th nerve in the ass, and I succeeded in making out that it furnishes those branches, which are exclusively distributed to muscles. This dissection I have repeated four times, and in an adjoined drawing have represented the fact as existing in the ass. I have since ascertained that, in the human body, precisely the same distribution exists."‡

Let us give equal credit to Mr. Mayo and Mr. Shaw upon this question. Both appear to have pursued a similar anticipation, but by different methods. Mr. Shaw made his experiment; Mr. Mayo, his dissection. If Mr. Shaw's experiment was not thoroughly to the point, Mr. Mayo, in *his* subsequent researches, had to correct his own anatomy, as will appear in our next citation.

The present stage of the inquiry brings us to consider the paper by Mr. Bell, of which the title stands at the head of this article. Its object appears to be twofold: first, to point out the general distribution of the ganglionless portion of the 5th; secondly, to establish, by reference to the supposed distribution of one of its branches, a partial illustration of the reasonableness of the "respiratory" theory. But it

* London Medical and Physical Journal, October 1822, p. 349.

† How vague Mr. Shaw's impressions must still have been respecting the ganglionless portion of the 5th is evident from the plate of the origins of the nerves which he subsequently gave in this Journal for December 1822.—REV.

‡ *Anatomical and Physiological Commentaries*, Part II. p. 9. July 1823.

has now for several years been matter of general knowledge that the ganglionless portion of the 5th is distributed to the muscles of the lower jaw, as their nerve of motion. *This point, therefore, required no further elucidation.* With reference to the *second* point, it almost raises a smile, even upon the grave countenance of a reviewer, to have to deal with a statement seriously propounded in the *Philosophical Transactions* for 1829, the substance of which Mr. Mayo published in 1822, and, having found it to be erroneous, published the correction of his mistake in 1823. But let us give the words of Mr. Bell.

"I prosecuted," observes Mr. Bell,* "with more interest the *ramus buccinalis labialis*. And nobody, I presume, will doubt that the distribution of this division confirms the notions drawn from the anatomy of the trunk, not only that the 5th nerve is the manducatory nerve as belongs to the muscles of the jaws, but also that it is distributed to the muscles of the cheek and lips, to bring them into correspondence with the motion of the jaws. Let us take in illustration the articulation of the bones. In the joints the muscles are attached to the capsular membrane in such a manner as to draw it from between the bones, and adapt it to the degree of flexion of the joint. If the cheek were a passive membrane, like the capsule of a joint, it would have required some such mechanical connexion with the jaw, or its muscles, as might have drawn it from between the teeth in the motions of mastication. But, being a muscular part, to bring it into just relation with the motions of the teeth, it must have an accordance through nerves, and act in sympathy: relax when the jaws are apart, and contract when they are closed. I think, therefore, we may perceive why a branch of the motor nerve of the muscles of the jaws sends a division to the muscles of the cheek and to the angle of the mouth."

From this statement it appears that Mr. Bell supposes the *ramus buccinalis labialis* to be a motor nerve to the buccinator. Such, too, it appears Mr. Mayo thought it in 1822. But, in 1823, Mr. Mayo gives a different account of the matter.

"I mentioned," says Mr. Mayo, "that I concluded that other branches of the 5th nerve, from their distribution to the pterygoid, masseter, temporal, and buccinator muscles, are voluntary nerves. This conclusion involved a trifling error: the pterygoid, masseter, and temporal muscles, are indeed exclusively supplied by the 5th, and therefore, without doubt, the branches so distributed are voluntary nerves; but the buccinator receives branches from the *portio dura* as well, and I have found subsequently that pinching

* *Phil. Trans.* 1829, p. 325.

the branch of the 5th, which perforates that muscle, produces no action in it."*

Again, in page 10 of the same essay, Mr. Mayo says, "In the preceding Number I have mentioned that the division of the portio dura of the 7th nerve paralyses the muscles of the face. Now, the buccinator muscle is intermediate between the cutaneous muscles of the lips and nostrils and the powerful muscles moving the jaw; and it is somewhat difficult to determine, after the division of the portio dura, whether the muscle in question be paralysed or not; but the question may be decided by pinching in succession, in the dead ass, that branch of the 5th which perforates the buccinator, and then the trunk of the portio dura. While the former experiment is unattended with any effect, the latter produces a distinct spasm of the buccinator, as well as of the other muscles about the lips and nostrils."

Mr. Mayo's account of the nervus buccinalis labialis is completed in his system of Dissections, published in 1825. In this volume there is an excellent figure of the distribution of the third division of the 5th; and the following remarks upon the branch of it which we are now considering, occur in the explanation of the plate:

"The nervus buccinatorius is represented as giving off two branches to the pterygoideus externus, and one to the temporal muscle, and finally turning over the margin of the former towards the buccinator muscle. I have satisfied myself, by repeated dissections, that *the portion of the nerve which passes onwards to the buccinator muscle and membrane of the mouth, does not contain any filaments from the smaller (the ganglionless) fasciculus; those elements of the buccinator nerve which are derived from the latter source are consumed in its temporal and pterygoid branches.* Since ascertaining the preceding anatomical facts, (facts already quoted about the ganglionless part of the 5th,) I find that they were known to Palletta, with the exception of that marked in italics."†

When we consider the evidence thus laid before our readers, and couple it with the facts that Mr. Mayo was the first to divide (in another experiment) the fifth nerve, *within the cranial cavity*, by which he established that the common sensibility of the eye depends on the 5th, and that the motion of the iris is independent of that nerve;‡ and that Mr. Mayo has shown the portio dura of the 7th and the 5th to rise together, and to be but *one nerve*,§ (the portio dura and

* Mayo's Anat. Comment. Part II. p. 8. When a *motor* nerve is pinched with forceps, in an animal recently killed, the muscles which it supplies are convulsed. This does not happen when a sentient nerve distributed to a muscle is irritated.—Rev.

† Mayo's Course of Dissections, p. 167, 1825.

‡ Mayo's Anat. Comment. Part II. p. 5.

§ Mayo's Outlines of Physiology, and Plates of the Brain.

the ganglionless part of the 5th having together the same relation to the ganglionic portion of the 5th which the anterior roots of the spinal nerves have to the posterior roots,) we feel that to him belongs the merit of having done most towards elucidating the functions of these nerves, and that his name will be associated in physiological science with the history of the 5th and 7th nerves, as that of Magendie with the history of the spinal nerves.*

Let us now turn to Mr. Bell's intermediate papers in the *Philosophical Transactions*, and consider the rest of his system of the respiratory nerves. We are compelled to be brief. There is not here, indeed, much temptation to enter into long discussion. Mr. Bell, misled by a theory, appears to us generally wrong upon all the points in which he advances what is new. We shall shortly advert to the leading ones.

In the first place, the pneumo-gastric nerve, the glosso-pharyngeal, and the seventh, do not arise, as Mr. Bell supposed, from a peculiar column of the medulla oblongata, but pass through the surface and great part of the substance of the medulla oblongata, to rise, as Mr. Mayo has shown, not from a tract apart, but *conjointly and together with the 5th and 6th and auditory nerves, from the floor of the 4th ventricle.*† In their origin, (however dissimilar the functions of these nerves are shown to be experimentally,) they have a strange agreement. In the second place, the spinal accessory nerve is met with in birds, as Mr. Mayo exhibited in his recent lectures before the College of Surgeons, and therefore has probably some other object in human beings, than to associate the action of the sterno-cleido-mastoideus and trapezius with the muscles of the chest in breathing. The spinal accessory rises, besides, from the back part of the medulla spinalis, not from the fore part, as Mr. Bell has represented it.‡ And in the third place, and finally, it is perfectly ridiculous to describe the phrenic nerve and the

* The reviewer has great pleasure in finding his judgment of the relative claims of Messrs. Bell and Mayo confirmed by the opinion of Mr. Broughton. This talented surgeon, who is also distinguished as a physiologist by his researches upon digestion, and more recently upon respiration, repeated, after Mr. Mayo, the experiments which we have narrated. The reader will find, in letters in the *Medical Gazette*, May 9th and June 6th, 1829, that Mr. B. attributes to Mr. Mayo the discovery of the uses of the facial branches of the 5th and 7th, and likewise the use of the ganglionless part of the 5th.

† Magendie has fallen into a remarkable error in tracing an imaginary origin for the 6th at the root of the anterior pyramid.—See, *Anatomie des Systèmes Nerveux*, par Magendie et Desmoulins; Plate 13. Paris, 1825.

‡ Bell's *Exposition of the Nerves*, p. 55.

external thoracic nerve as having any distinguishing peculiarity, in their common and spinal origin, from the other branches of the axillary and cervical nerves.

With equal brevity must we despatch Mr. Bell's remarks upon the eye.*

In the first place, the observation that the eyeball is raised during sleep, is Soemmering's, not Mr. Bell's.

In the second place, the inferior oblique muscle of the eye directs the axis of the eye upwards and outwards, not upwards and inwards, as Mr. Bell supposes.

In the third place, our seeing objects erect by means of inverted images depends upon a law of vision, most ingeniously illustrated by Mr. Mayo's experiment of compressing the retina, which is totally independent of, and unconnected with, any sense of exertion and muscular activity, to the suggestions of which Mr. Bell refers this phenomenon. Nothing, again, can be wilder than to contrast the straight and oblique muscles of the eye, the first as voluntary, the second as involuntary (instinctive?) muscles: the distribution of the nerves precludes any such arrangement; and an examination of the comparative anatomy of the optic muscles clearly proves the correctness of the common notions on this subject. In fish, reptiles, birds, and mammalia, as Mr. Mayo displayed in his College lectures, the obliqui are uniformly placed as antagonists to the recti; the recti always draw the eye backward, the obliqui always sling the eye forward. The recti individually turn the eye upwards, downwards, outwards, or inwards, as well as retract it: the obliqui rotate the eye, as well as draw it forward.

The best account of the functions of the nerves is contained in Mr. Mayo's "Outlines of Human Physiology." The subject is here stripped of theoretical disguise, and is treated with that lucid brevity which marks Mr. Mayo's style. We have before strongly recommended Mr. Mayo's treatise to our readers; once more we point out its value. The simplicity of truth never delights so much as when the mind has been previously bewildered and fatigued with brilliant, but vague and delusive, speculations.

* Philos. Trans. 1823, p. 175.

A Treatise on Neuralgic Diseases, dependent upon Irritation of the Spinal Marrow and Ganglia of the Sympathetic Nerve.

By THOMAS PRIDGEN TEALE, Member of the Royal College of Surgeons in London, of the Royal Medical Society of Edinburgh; senior Surgeon to the Leeds Public Dispensary, &c.
—8vo. pp. 120. Highley, London, 1829.

IT is to the industry of modern pathologists that we are indebted for the information we possess respecting many of those diseases which are dependent upon organic changes or functional derangements of the spinal marrow. Hippocrates, Celsus, Aretæus, &c. were aware that convulsions and palsy of the limbs might arise from lesions of this important organ. This prominent fact could not escape their notice, and it was almost the only one with which they were acquainted in reference to the subject. By his clinical observations, Frank threw much light upon this interesting inquiry.* He advanced much further than any of his predecessors in his investigations into this most important part of pathology; and, if he failed to prove, he at least showed it was highly probable that many painful and obscure diseases, attacking remote parts of the body, arose from injury or irritation of the spinal marrow. We do not mean to assert that Frank entered upon this investigation without assistance from previous writers. By various authors, and Hoffman in particular, it had been suggested that affections of the spinal marrow might have a greater share in the production of many diseases than had previously been supposed. Frank, however, did more than throw out suggestions: he appealed to his practical observations to prove the solidity of his doctrines, but still he, in general, wanted that convincing evidence which dissection alone could have afforded.

To approach nearer our own day, we may mention the work of Dr. Ollivier, which contains a valuable body of information.† Upon this subject the researches and experience of Dr. Abercrombie have also been given to the profession;‡ and to this able and most useful writer we should be grateful for many ingenious observations and illustrative cases, which tend to show how various and perplexing are the symptoms which frequently owe their origin to disease or derangement of the spinal cord. The interesting

* *De Vertebralis Columnæ in Morbis Dignitate.* Delect. Opuscul. Med. vol. ii. 1792.

† *Traité de Moelle Epinière, et de ses Maladies,* tome ii. Paris, 1827.

‡ Abercrombie on Diseases of the Brain and Spinal Cord. 2d Edition 1829.

essay of Dr. and Mr. Griffin, of which the first part is contained in our present Number, must not be passed over without honourable mention. It is a valuable contribution to our knowledge of the various functional disturbances which often arise from irritation of the spinal cord.

But we must proceed to the analysis of the work before us.

The term Neuralgia, Mr. Teale observes, which was originally employed to designate certain affections of nerves attended with severe pain, has of late, with great propriety, been extended from its original and literal signification, to many other morbid affections of nerves which are not characterised by pain, but by some other perverted state of their functions.

We cannot admit that any term can be thus wrested from its true signification "with great propriety." To avoid such an abuse of language, it would be better, upon the principle *demalis minimum*, to add a more accurate expression even to our already over-stocked vocabulary, which would correctly include the diseases it was intended to define. If a classical patient, free from pain, were told that his malady was "neuralgic," he would attribute the vicious diction either to the philological or the professional ignorance of his physician. In the above more extended signification, however, the term is not unfrequently employed, and the number of "neuralgic affections" is thus greatly increased.

Mr. Teale believes that the difficulty and embarrassment which have attended the diagnosis and treatment of these affections have principally arisen from mistaken views of their pathology.

"They have too often been regarded as actual diseases of those nervous filaments which are the immediate seat of the neuralgia, instead of being considered as symptomatic of disease in the larger nervous masses from which those filaments are derived: hence the treatment has too frequently been ineffectually applied to the seat of neuralgia, instead of being directed to the more remote and less obvious seat of disease." (*Introduction*, p. 2.)

It is now generally admitted as a pathological axiom, that disease of the larger nervous masses, as the brain and spinal marrow, is not so much evinced by phenomena in the immediate seat of disease, as in those more remote parts to which the nerves arising from the diseased portion are distributed. In the more severe forms of disease, this principle is readily admitted and recognised.

"When, for instance, one half of the body shall have lost its

sensibility, and the corresponding muscles their power of action, the skin and the muscles are not regarded as the seat of disease, but the brain is immediately referred to. In the slighter forms of disease of the brain and spinal marrow, such as do not completely obliterate, but merely impair or pervert the functions of the nerves, such as do not paralyse the sentient and muscular powers of the part, but produce weakness, tremors, spasms, &c. in the muscular system, and numbness, pricklings, pains, and other morbid feelings in the nerves of sensation, this important principle, which as strictly obtains as in the former instance, is too often entirely overlooked; and a numerous class of complaints, of very frequent occurrence, are regarded as nervous or spasmodic diseases of the part affected, instead of being considered as actual diseases of that portion of the brain or spinal marrow from which the nerves of the part are derived." (*Ib.* p. 3.)

The same pathological principle Mr. Teale conceives is equally applicable to the sympathetic system of nerves; and, although it may be difficult to establish this opinion by actual experiment, yet he thinks it may be rested upon a well-grounded analogy, which will justify us in regarding the nervous masses of the ganglionic system as bearing the same relation to the nerves derived from them, as the large nervous masses of the cerebro-spinal system bear to their respective nerves.

"Influenced by such considerations, I have, for a few years, been in the habit of treating many of these nervous affections as diseases of some portion of the spinal marrow or ganglia; and have been still further confirmed in my opinion by the frequent and almost uniform co-existence of tenderness on pressing some portion of the vertebral column, and the circumstance of the tender portion of the spine being in the particular situation where the nerves of the affected part originate." (*Ib.* p. 4.)

In corroboration of the opinions he advances, Mr. Teale quotes freely from Dr. Brown,* Dr. Darwall,† and Mr. Player;‡ each of whom has recently published excellent essays upon the subject.

The symptoms of irritation of the spinal marrow consist in an infinite variety of morbid function of the nerves of sensation and volition, which have their origin in the spinal marrow. The parts in which these morbid functions are exhibited, of course, bear reference to the distribution of the spinal nerves.

* On Irritation of the Spinal Nerves, by Thomas Brown, M.D. (Glasgow Med. Journal, May 1828.)

† Observations upon some forms of Spinal and Cerebral Irritation, by John Darwall, M.D. (Midland Med. and Surg. Reporter, May 1829.)

‡ Quarterly Journal of Science, vol. xii. p. 428.

“ The morbid states of sensation include every variety, from the slightest deviation from the healthy sensibility of any part to the most painful neuralgic affections on the one hand, and to complete numbness or loss of feeling on the other; including pains which may be fixed or fugitive, or darting in the direction of the nerves, prickling and tingling sensations, a sense of creeping in the skin, of cold water trickling over it, and numerous other states of perverted sensation, of which words are inadequate to convey a description. In the muscular system we find weakness or loss of power, tremors, spasms or cramps, and sometimes a tendency to rigidity.

“ These symptoms sometimes exist in so slight a degree, that the patient considers them unworthy of notice, and only admits their existence when particular inquiry is made respecting them: the only complaint which he makes, being of an unaccountable sense of weakness and inability of exertion. In other cases the tremors have excited alarm; sometimes the neuralgic pain in the scalp, or the fixed pain in the muscles, particularly when it occurs in the intercostal muscles, has suggested the idea of serious disease in the brain or in the lungs; and when the pain is seated in the muscles of the abdomen, a fear that some organic disease of the abdominal viscera has taken place harasses the mind of the patient. The muscular weakness, in some cases tending to paralysis, often suggests the fear of apoplexy, or paralysis from cerebral disease.

“ The affection is often of very protracted duration, undergoing alternate variations, from the sanative powers of the constitution and the different exciting causes of disease. There are many individuals in whom the complaint has existed, in varying degrees of intensity, for a series of years, without its real nature having been suspected; the patients and their medical attendants having regarded it throughout as a rheumatic or a nervous affection.” (P. 13.)

In this complaint, tenderness in the portion of the vertebral column which corresponds to the origin of the affected nerves, is generally evinced by pressure. The symptoms, of course, vary according to the particular part of the spine which is affected, and bear reference to the distribution of the spinal nerves.

“ When the upper cervical portion of the spinal marrow is diseased, we frequently find neuralgic affections of the scalp; the pain strikes in various directions over the posterior and lateral parts of the head; sometimes the twigs in the neighbourhood of the ear, sometimes those which ascend over the occiput to the superior part of the scalp, are more particularly the seat of the complaint; the nervous twigs distributed to the integuments of the neck are occasionally affected, the pain darting across the neck to the edge of the lower jaw, and sometimes encroaching a

little upon the face. These neuralgic diseases frequently assume an intermittent form, the paroxysms generally occurring in the evening. A stiff neck, or impaired action of the muscles moving the head, frequently attends the affection of the upper cervical portion of the spinal marrow; and occasionally the voice is completely lost, or suffers alteration, and the act of speaking is attended with pain or difficulty.

"Irritation of the lower cervical portion of the spinal marrow gives rise to a morbid state of the nerves of the upper extremities, shoulders, and integuments at the upper part of the thorax. Pains are felt in various parts of the arm, shoulder, and breast; sometimes the pain takes the course of the anterior thoracic branches of the brachial plexus, occasionally the pain is fixed at some point near the clavicle, scapula, or shoulder-joint, at the insertion of the deltoid, or near the elbow, or shoots along the course of some of the cutaneous nerves. Frequently one or both of the mamæ become exquisitely sensible and painful on pressure, and some degree of swelling occasionally takes place in the breast, attended with a knotty and irregular feel, when the neuralgic pains have existed a considerable time in that part. Prickling and numbness, tingling and creeping sensations, are often felt in the upper extremities; and also a sensation of cold water trickling over the surface. On rubbing the hand over the part affected, a soreness is frequently felt, which is described as not merely situated in the integuments, but also in the more deep-seated parts. In the muscular system are observed most frequently a weakness of the upper extremities, sometimes referred particularly to the wrists; tremors and unsteadiness of the hands; also cramps and spasms, of various degrees of intensity. Occasionally there is an inability to perform complete extension of the elbows, the arm appearing restrained by the tendon of the biceps; pain and tightness being produced in this part when extension is attempted beyond a certain point. As far as I have observed, the pains and other morbid feelings in the upper extremities and chest are felt more frequently and more severely on the left than on the right side." (P. 15.)

When the upper dorsal portion is affected, in addition to various morbid sensations similar to those in the extremities, there is often a fixed pain in some part of the intercostal muscles, and perhaps tenderness on pressure. The lower dorsal half of the spinal marrow being the seat of the irritation, the symptoms are again modified. Frequently there is a sensation of a cord tied round the waist; soreness along the cartilages of the lower ribs; pains, fixed or fugitive, in the parietes of the abdomen.

From a similar affection of the lumbar and sacral portion of the spinal cord, there often arises soreness in the scrotum, spasms, tremors, and weakness of the lower extremities. A recumbent position is frequently of service.

“ This irritation, or subacute inflammatory state, of the spinal marrow, is not necessarily connected with any deformity of the spine, or disease in the vertebræ. It may coexist with these, as well as with any other diseases, but it so repeatedly occurs without them that they cannot be regarded as dependent upon each other. Where, however, inflammation and ulceration of the vertebræ or intervertebral cartilages exist, it is probable they may predispose to, and in some instances act as, an exciting cause of an inflammatory state of the nervous structures which they contain; for we not unfrequently find inflammatory affections of the vertebræ in conjunction with symptoms of irritation of the spinal marrow. But these two affections, although coexisting, bear no regular relation to each other; and, during the progress of the vertebral disease, the affection of the nervous structures is subject to great changes and fluctuations. The local remedies employed for arresting the disease in the bones often alleviate the affection of the spinal marrow, at the very commencement of the treatment, long before the vertebral disease is suspended; but, as the neighbouring inflammation in the bones appears to predispose or excite the nervous mass which they contain to disease, relapses of the nervous affections are repeatedly occurring during the whole course of the complaint.” (P. 18.)

The lateral curvature and excurvation of the spine are not considered by Mr. Teale to have any necessary connexion with spinal irritation. If the pressure and stretching of the nerves produced by the curvature were the cause of the nervous symptoms, they would continue as long as the deformity remained, which is not the case.

Treatment. When the different neuralgic symptoms which have been enumerated can be traced to this morbid state of some portion of the spinal marrow, the treatment that ought to be pursued is readily decided upon.

“ Local depletion by leeches or cupping, and counter-irritation by blisters to the affected portion of the spine, are the principal remedies. A great number of cases will frequently yield to the single application of any of these means. Some cases, which have even existed several months, I have seen perfectly relieved by the single application of a blister to the spine, although the local pains have been ineffectually treated by a variety of remedies, for a great length of time. A repetition of the local depletion and blistering is, however, often necessary after the lapse of a few days, and sometimes is required at intervals for a considerable length of time. In a very few obstinate cases, issues or setons have been thought necessary; and where the disease has been very unyielding, a mild mercurial course has appeared beneficial.” (P. 20.)

The diet and general health of the patient are, of course,

to be attended to. A recumbent position is frequently beneficial, but experience has taught Mr. Teale that it is not essential, unless there should be actual disease of the vertebræ. Stimulating liniments are recommended, if there be any fear of a relapse.

To illustrate these observations, a series of cases is given of neuralgic affections of various parts of the body, arising from spinal irritation, or slight inflammation. We select the following as examples.

"Mrs. B., æt. fifty-three, mother of a large family, represents herself as having been severely afflicted with rheumatism during the greater part of her life. She now suffers from pain in the neck and head, pains about the clavicles, difficulty in moving the arms, which feel fixed at the shoulder-joints. The pain in the neck and between the shoulders is fixed and constant, being nearly the same both day and night: it is a little alleviated by supporting the back against a chair. There are also darting pains extending from the cervical portion of the spine upwards over the occiput, and downwards across the neck and over each shoulder. Both arms are affected with aching pains over their whole extent, and with a sense of soreness on pressing or rubbing the skin; prickling sensation, cramps, and numbness in the forearms, hands, and fingers. Difficulty in moving the arms, and in using her fingers in sewing or knitting. Frequent sudden 'twitching' pains in the neck, arms, and trunk; occasional pains in the abdominal muscles, relieved by recumbency. No affection of the lower extremities; appetite poor; no fever; no cough or difficulty of breathing; catamenia ceased about six years ago.

"She has always considered the disease to be rheumatism, and has tried a great variety of remedies usually employed in that disease, but without much benefit.

"Tenderness in the two lower cervical and six upper dorsal vertebræ.

"Leeches were directed to be applied to the tender portion of the spine, and on the following evening a blister to the same part. Recumbency was also recommended.

"The blister produced an unusual degree of inflammation in the skin, which continued several days, and was accompanied with considerable fever. During the febrile state the neuralgic symptoms were rather aggravated, but, as the fever subsided, they gradually disappeared.

"On the 29th of December I took leave of her, as she was then perfectly well: she felt a degree of muscular power, particularly in the upper extremities, which she had not been accustomed to for several years. She was quite free from pain.

"June 20th, 1829. Since the last report she has enjoyed good health, with the exception of occasional returns of the pain during winter, which were so slight as to produce but little inconvenience,

and were soon relieved by leeches and the application of turpentine liniment to the spine. These last attacks were attended with flatulence." (P. 25.)

The next case, of "neuralgia of the mamma, or irritable breast," deserves especial attention.

"Mrs. —, æt. forty-eight, but without having experienced any change in the catamenia, of a healthy appearance, and mother of a large family, had suffered about seven years from a painful affection of the left breast. On examination, it was found to be exquisitely sensitive to the slightest touch; it was somewhat increased in size, and irregularly indurated, having a knotty feel, and an obscure sense of tumors, as if the glandular structure were enlarged at different parts. The integuments and cellular substance between the breast and clavicle, and towards the axilla, were thickened. There was a constant sense of uneasiness in the part, but her chief sufferings arose from its highly sensible state, which constantly exposed her to pain from the irritation of her dress, or any accidental contact. Her spirits were depressed, and an apprehension that the disease would prove cancerous, although she was repeatedly assured of the contrary, was a source of great anxiety. Leeches, evaporating lotions, and warm fomentations, had been employed, and medical treatment had been particularly directed to the digestive organs: these means were occasionally productive of slight alleviation, but never of permanent benefit. The complaint varied in degree, being sometimes less severe for a few weeks, without any obvious cause for the temporary amendment.

"Whilst in this state, (September 1827,) she became subject to pains in the scalp, and vertigo, attended with flatulence. These symptoms directed my attention to the spine, which, on examination, was found to be tender in several parts. The most painful vertebræ were the second cervical, the seventh cervical, and two upper dorsal. Leeches were applied to these parts, with considerable relief to the pains in the scalp and vertigo. Since that time she has been occasionally in the habit of applying leeches, a blister, or a sinapism, of her own accord, when there has been any return of uneasiness in the head.

"On making inquiry (August 10th, 1829,) respecting the complaint in the breast, of which I had not heard any mention for several months, she tells me that from the time of her commencing the treatment by local applications to the spine, the affection of the breast has disappeared. The pain and swelling are removed, and the breast resembles the other in every respect.

"The circumstance of finding a portion of the spine tender, and the removal of the tenderness by suitable remedies being unexpectedly accompanied with relief of the fulness and pain in the breast, could not fail to produce a powerful impression on my mind, and to excite a suspicion that this irritable affection of the

breast was a neuralgia of that part dependent upon disease of the spinal marrow." (P. 26.)*

Mr. Teale next devotes a few pages to the consideration of certain neuralgic affections of the heart and stomach, which he is disposed to attribute to irritation of the ganglia of the sympathetic nerve. To show that this conjecture is probably correct, he refers to various physiological experiments, from which, he presumes, it may be inferred,

"That painful affections of the nerves of the heart, lungs, and stomach, are not seated in the filaments of the pneumo-gastric nerve, since this nerve is not a nerve of sensation, and therefore cannot be the seat of pain; consequently, that they must be seated in the filaments of the sympathetic.

"That the action of the blood-vessels and muscular viscera is dependent upon the sympathetic, and consequently that irregularities in the action of these involuntary muscles may, with much greater probability, be referred to disease in the sympathetic than in the cerebro-spinal system.

"That, as digestion has been observed to take place in some instances after the division of the eighth pair, and that it proceeds in animals which have not this nerve distributed to the stomach, it is evident that some other system of nerves (the sympathetic) exerts a considerable influence in digestion, and consequently that disease in the sympathetic may disorder or interrupt the digestive process." (P. 63.)

Mr. Teale is apparently not aware of the fact stated by Mr. Mayo, "that the fibrils which it (the pneumo-gastric nerve) distributes to the larynx, and pharynx, and œsophagus, are nerves of *sensation* and motion."† From the cautious manner in which Mr. Teale very judiciously offers his suggestion of the *probability* that irritation of the sympathetic ganglia gives rise to the various neuralgic symptoms he describes, it is evident that he has formed a correct estimate of the great uncertainty that yet hangs over the functions of this intricate part of the nervous system. He confesses that, "in the absence of direct evidence from dissection, the precise nature of these affections of the spinal marrow and ganglia must, to a certain degree, remain conjectural."

As a proof that the ganglia are occasionally the seat of disease of such intensity as to produce permanent alteration in their structure, and that the symptoms produced were

* Sir Astley Cooper gives a chapter upon the "irritable tumor," in which many instructive remarks are made, both as to the symptoms and diagnosis of this disease. (Illustrations of the Diseases of the Breast, ch. ix. p. 76.)—REV.

† Outlines of Physiology, 2d Edition, p. 338.—REV.

principally exhibited in the remote organs to which the nerves of the affected ganglia were distributed, some cases recorded by Lobstein are referred to.* Mr. T. relates ten cases of neuralgic affections of the heart, stomach, and other parts of the body, in none of which did the patient complain of any pain in the spinal column, although, upon a careful examination, tenderness of the vertebræ was discovered. In some of these instances the true cause of the symptoms had been overlooked by other practitioners, and the treatment adopted had consequently failed. The experience of Mr. Teale enabled him to detect the real source of mischief, and, by the application of leeches and blisters to the affected part of the spine, occasionally a recumbent position, and proper attention to the general health, the patients were relieved.

In conclusion, Mr. Teale offers some remarks on angina pectoris. He gives a brief account of the different opinions that have been held respecting the pathology of this malady.

“ Numerous cases have occurred, presenting the characteristic signs of angina pectoris, in which a perfect recovery has taken place, which could scarcely have been possible if any considerable organic change had existed in the structure of the heart. Many other cases of angina, which have proved fatal, and have been inspected after death, have not exhibited any traces of diseased structure in that organ; and repeated instances of ossification of the coronary arteries have been met with, in which the symptoms of angina were not present. From these circumstances we must conclude that the organic changes in the structure of the heart are not essential to the disease, and that although they frequently co-exist with angina, yet they are not the cause of those symptoms to which that name has been assigned. We must then look to some other source for the explanation of the phenomena.” (P. 99.)†

Many writers of repute have attributed the most distressing symptoms of angina pectoris to disturbance of some portion of the nervous system;‡ but this appears to have been regarded more as an accidental or collateral circumstance, the affection of the heart being regarded as the principal disease. Mr. Teale is fully convinced that it is

* London Medical and Physical Journal, March 1824.

† Mr. H. Watson relates a case of very extensive ossification of the coronary arteries, in which there was no symptom of thoracic disease. (Medical Commun. vol. i. p. 234.) Dr. Latham (College Trans. vol. iv. p. 278,) describes two cases of enlarged liver, in which all the genuine symptoms of angina pectoris were observed. Both patients died suddenly.—REV.

‡ Dr. Wall, Med. Trans. vol. iii. Dr. Fothergill, Med. Obs. and Inq. vol. v. 1776. Dr. Johnstone, Mem. Med. Soc. vol. i. Treatise on Angina Pectoris, by W. Butter, M.D. 1791. M. Desportes, sur l'Angine de Poitrine, Paris, 1813. Laennec, Traité de l'Auscultation Médiate, &c. 2d Edit.

to the nervous system we must look for the seat of this disease;

"but the great error which has been committed by those who have assigned to angina pectoris a seat in the nerves, consists in their having overlooked the pathological fact to which I formerly alluded, namely, that when any of the nervous masses, as the brain, spinal marrow, or ganglia, are the seat of disease, the morbid phenomena are not so much exhibited in the masses themselves, as in the parts to which the nerves arising from them are distributed.

"The treatment has also been conducted with reference to such pathological views: blisters, issues, and other remedies have been applied by the earlier writers to the neighbourhood of the heart or stomach; most frequently, however, without much benefit." (P. 103.)

Mr. Teale has been induced to refer the various groups of symptoms which have been described as angina pectoris to an affection of some portion or portions of the spinal marrow, and of the corresponding ganglia of the sympathetic, by the following considerations:

"1. The fact, as I have before observed, that most of the morbid phenomena exhibited in the extreme filaments of nerves, are seldom owing to disease in the nerves themselves, but to an affection of the nervous mass from which they are derived.

"2. The co-existence of pain on pressing some portion of the spine with the symptoms constituting angina pectoris; and the correspondence of the painful part of the spine with the particular symptoms which are present; namely, tenderness in the lower dorsal portion of the spine in conjunction with the stomach affection, constriction, &c., and tenderness in the cervical spine, with pains in the arms, breast, and shoulders, and palpitations.

"3. The relief obtained by local antiphlogistic measures to the spine; for instance, to the lower dorsal portion when the stomach is affected and there is constriction, and to the cervical portion when there is an affection of the arms and palpitations." (P. 107.)

Three cases are related, which appear to support the opinions of the author. In each, local tenderness of the vertebræ was detected, and the symptoms were relieved by the application of blisters, leeches, and stimulating liniments, to the part.

Mr. Teale is anxious that he may not be thought desirous of advocating a theory of uniform infallibility, or a practice invariably successful. "Disappointments will occasionally occur, and failure must sometimes be encountered."

We have been much interested in the perusal of this little work, and we believe there are few practitioners who may not derive instruction from the pathological doctrines and practical hints it contains.

An Experimental Inquiry into the Laws which regulate the Phenomena of Organic and Animal Life. By GEORGE CALVERT HOLLAND, M.D. Bachelor of Letters of the University of Paris; formerly Senior President of the Hunterian Medical Society, and President of the Royal Physical Society of Edinburgh.—8vo. pp. 462. Edinburgh, Maclachlan and Stewart; and Simpkin and Marshall, London, 1829.

It would be impossible within the limits of an ordinary review to follow the author of the volume before us, step by step, through the close critical examination to which he subjects various physiologists, who have before entered the same field of investigation. Indeed, if we had the space, we should hardly have the courage to step in, as intermediate critics, between different experimental physiologists, who from the very same experiments arrive at the most discrepant inferences. A great part of the work is occupied in attempting to shew that John Hunter, Wilson Philip, and Dr. Edwards, of Paris, and other physiologists, have established erroneous conclusions, from the various experiments which they have instituted, for the purpose of clearing up different physiological perplexities. Neither can we do full justice to the many original speculations Dr. Holland enters into, in reference to the laws which regulate the phenomena of organic and animal life. Some of his most important corollaries we shall notice, and especially those which bear upon practical points; without, however, entering into the detailed arguments upon which his doctrines are established, for they can only be duly estimated by an attentive perusal of the volume itself. We shall confine ourselves, therefore, to a succinct account of the leading objects of the work, which will be sufficient to convey to our readers a general impression of its character. In a very neat introduction, Dr. Holland points out the danger of being too indulgent, either to the experimentalist or theorist. The former seldom commences his practical inquiries without having some preconceived view or principle to establish or refute, and, whatever be the nature of the conclusions, he is apt to seize and apply with avidity such only as are consonant with his own opinion.

Many pages are occupied in considering the source of animal heat; and, since the completion of the work, the author tells us an idea has struck him which appears sufficient, in conjunction with principles to which he refers, to explain it satisfactorily.

"The explanation I shall propose goes far to support the doctrine of BLACK, in which the increase of heat is attributed to chemical

changes in the lungs. It is now, I believe, almost universally allowed, that the arterial is warmer than the venous blood, and it is more than probable that this result depends on chemical action. By taking into consideration, that a small quantity only of the air within the lungs is at any one moment deteriorated, and, still further, that the left ventricle contracts 70 or 80 times per minute, in order to propel the arterial blood which is transmitted by the lungs, we shall have reasons sufficiently ample to account for the possibility of these organs bearing such changes, and for the ease with which the system is supported in an equable temperature. If the body be supposed to possess 30 pounds of blood, and the heart to transmit at each contraction two ounces, and to contract 75 times per minute, we shall find that the whole mass of blood will pass through the lungs once every three minutes, or twenty times per hour. As it has been proved by direct experiment that the blood acquires at least one degree of heat in passing through the lungs, it necessarily follows, at this moderate calculation, that the system will receive 20 degrees of heat in an hour, or 240 degrees every twelve hours. If the respiration be accelerated, and the contractions of the heart be increased to 100, the mass of the blood will circulate through the thoracic organs in one fourth less time than is stated above, and consequently the temperature will be augmented one fourth: the increase of one degree, instead of being repeated every three minutes, will be repeated every two and a quarter minutes.

"According to the doctrine of CRAWFORD, the evolution of heat is confined to the capillaries distributed throughout the body; but the present explanation of the manner in which the system acquires 20 degrees per hour, or 240 every twelve hours, is unfavorable to such an opinion, as it proves that the lungs transmit an immense quantity of sensible heat to the body, a quantity, it is highly probable, sufficient for every organic necessity.

"From this view of the chemical changes in the lungs, it is apparent that the various internal parts of the system will possess, as nearly as possible, the same degree of animal heat. The blood which the left ventricle sends out at one contraction, is calculated to supply the deficiencies incurred by an equal portion which is returned to the right auricle; and as the whole circle of circulation is completed in two or three minutes, there can scarcely be a perceptible difference in the temperature of the different parts of the system." (*Introduction*, p. 20.)

The three first chapters are chiefly devoted to an examination of the physiological inferences, drawn from experiments, by Wilson Philip, upon the subjects of animal heat and digestion. Dr. Holland endeavours to prove that these inferences are incorrect; but, while we admit that he has displayed a certain degree of argumentative ingenuity, we cannot assign to him the merit of having overthrown the

doctrines he attacks. In the fourth chapter are some interesting observations on the distribution of the blood, at different ages and seasons. Dr. Holland draws the following conclusions.

"1. That the blood in all young animals is generally diffused through the system, on account of the internal necessities making little demand upon this fluid; and that the character of this distribution is changed in proportion to the development of these necessities.

"2. That, at the maturity of the animal frame, the internal organs are more vigorous than at any other period of life; and that, as the natural or diseased action of these is augmented, if unaccompanied by fever or exercise, the blood in all cases is determined to them in greater quantity than natural, either maintaining the regular internal circulation, or extending this to a state of aberration.

"3. That, at the decline of the powers of life, the blood is more internal in its circulation than at any other period, from the concurrent influence of the previous gradual changes tending to promote this effect, and from the imperfection of those functions essential to renew its qualities and facilitate its motion." (P. 115.)

The succeeding chapter is on the "temperature at different ages;" and in the sixth, the manner in which the system is adapted to the influence of cold is considered. Upon one subject, the best authorities are opposed to Dr. Holland: he imagines that insane persons are peculiarly insusceptible to extreme cold, and in proof of this opinion, he remarks that,

"There are, indeed, several cases on record, in which individuals are stated to have escaped from confinement when affected with insanity, during the greatest severity of winter, without the protection of even their ordinary dress, and who were afterwards taken, and found to have been exposed for many hours to the bitter wind of the season, without suffering from the exposure." (P. 158.)

A few instances are insufficient to establish a general principle. Dr. Burrows, the best practical writer of the day, on insanity, declares that there is no mistake which has inflicted such incalculable evils upon the inmates of lunatic asylums, as the erroneous belief that they are particularly insusceptible to extreme cold. So far from this being true, he states that they are generally very obnoxious to either extreme of temperature.* Dr. P. S. Knight, also, observes that "lunatics, like all other invalids, cannot bear cold so well as persons in health: in fact they are always chilly and seek warmth, and their animal powers

* Commentaries on Insanity, by G. M. BURROWS, M.D., p. 388.

are below the healthy standard, frequently indeed greatly reduced, and their inability to resist the effects of cold is in proportion."* Dr. Holland, indeed, appears to have founded his opinion upon those cases of insanity in which the patient keeps himself warm by constant exercise. But this fact does not shew that lunatics in particular are at all insensible to cold. The sane, as well as the insane, when in active bodily exercise, are equally insusceptible to the depressing influence of diminished temperature; and, if the mind be powerfully excited, many other external sensations are unheeded.

In the next chapter the author offers a few brief remarks on the rapidity of hibernating animals. This subject is more fully discussed in Dr. Fleming's work on Zoology.† The continuance of life during the period of hibernation, in animals, is thus succinctly yet satisfactorily accounted for:

"No part of Nature subject to the laws of organization is indebted for its existence to the excited activity of its functions, but to the observance of those intimate relations subsisting between the powers which add and those which subtract. Whenever the former predominate over the latter, life then displays its exuberance, the plant throws out its leaves or expands its flowers, and the energy of the animal frame is concentrated to strengthen old or develop new functions, or to excite disease; and when the latter become superior to the former, the plant droops, and the animal decays. But if these powers are equally diminished, as vegetation is in winter, or as happens to animals in a state of torpidity, it is almost impossible to prescribe boundaries to their duration." (P. 165.)

The means by which the system is enabled to bear a temperature much superior to that of the body; the influence of disease on the production of heat, and the function of the eighth pair of nerves; the influence of narcotics on the generation of animal heat, and on the digestive powers; and the causes which influence the action of the heart, are the subjects which are next considered. The thirteenth chapter embraces a more practical discussion, that of palpitation; the general and organic causes which produce this affection are inquired into.

"Palpitation of the heart occurs very frequently in the constitution of the female at two very different periods of life. On the developement of the uterine functions, the circulation of the blood undergoes great changes; new demands are made, and the regular

* Observations on Derangement of the Mind, by PAUL SLADE KNIGHT, M.D. 1827, p. 123.

† Vol. II. p. 45.

course of the vital fluid is directed to other organs. But these important alterations are not immediately established, and, until they are, disorders in the circulation, disturbing the motion of the heart, are extremely liable to occur. When these organs are fully formed, the delicacy of their functions is subject to the influence of many circumstances, all of which act powerfully on the distribution of the blood. At the latter period of life, the demands of these parts of the system are diminished. The blood, which has for a series of years been determined here to supply the activity of functions unessential to life, is now no longer required. It is therefore the intention of nature to diffuse the quantity appropriated to these functions equally throughout the system; but the attainment of this object is occasionally opposed, or rendered imperfect by a variety of causes calculated to derange the sanguiferous system.

"The application of cold has the tendency to determine the blood upon the internal organs; and if palpitation be the consequence of its influence, this arises from an overcharged state of the lungs." (P. 285.)

The fifteenth and sixteenth chapters are on the "Physiology of passion," and the "nature of the vital principle." These are subjects upon which we could not touch without entering into a wide and very unsatisfactory field of speculation.

Chapter 17. On sympathy. In this chapter the author "attempts to expose many important errors, either committed or supported by physiologists of eminence;" and at the same time proposes opinions, that appear to him better calculated to solve the most essential phenomena of sympathy, and assist our indications of practice. Sympathy, however produced by the different states of the body, Dr. Holland divides into four classes: sanguineous, sensorial, nervous, and nervo-sensorial.

"1. By the term sanguineous sympathy, I allude to affections produced and propagated by changes in the nature, quantity, and circulation of the blood.

"2. By sensorial sympathy, I mean certain effects originating in sensations or states of the mind, subsequently propagated through the medium of nerves: an example of this division is the production of syncope and vomiting from a mental cause.

"3. Nervous sympathy is the propagation of certain effects accomplished by nerves alone, as in risus sardonius, arising from irritation or inflammation of the diaphragmatic nerve communicated to the seventh pair of the face.

4. Nervo-sensorial is a term employed to explain phenomena, which result from the irritation of a nerve or nerves, of, which the brain takes cognizance, and which afterwards transmits its impres-

some to other organs of the body. Vomiting is frequently an instance of this reaction." (P. 400.)

The last chapter treats of the general action of emetics on the system, and contains some remarks on their efficacy in chronic and acute diseases.

From the sketch which we have given of this work, it will be seen that it is almost entirely occupied in canvassing the doctrines of previous physiological writers. In support of his peculiar opinions, Dr. Holland frequently argues with much talent and ingenuity.

COLLECTANEA.

*Floriferis ut apes in saltibus omnia libant,
Omnia nos, iidem, depascimur aurea dicta.*

PHYSIOLOGY.

On the Action of the Spinal Marrow in Respiration. By M. FLOURENS.

EVERY body knows the opinion of the celebrated LE GALLOIS, who was led by a series of experiments, then entirely new, to place the seat of the principle of the motions of the heart in the spinal marrow.

M. Flourens shewed, in 1823, first, that the circulation, which, in adult animals, is instantly stopped by the destruction of the spinal marrow, on the other hand, survives its destruction a certain time in new-born animals; secondly, that, even in adult animals, (and this had already been determined by Dr. WILSON PHILIP,) the circulation survives the destruction of the spinal marrow, provided the respiration be kept up by insufflation. Thus, in the young animal, in which respiration is less necessary to the circulation, the spinal marrow is also less necessary. It is therefore especially because it is subservient to respiration, that the spinal marrow is subservient to circulation.

Whence it follows that, if there were an animal in which the respiration might be completely disconnected, at least for a certain time, from the spinal marrow, the circulation might also be completely disconnected from it.

This animal is the fish. "I have shown," said M. Flourens, "by previous experiments, that the spinal marrow may be entirely destroyed in fishes, without destroying the respiration; seeing that it is no longer from the spinal marrow, as in the other classes, but from the medulla oblongata alone, that in these animals the nerves of the respiratory mechanism take their origin."

The spinal marrow may equally be destroyed in fishes without destroying the circulation.

"I successively destroyed, in several carps and barbels, the whole spinal marrow, without touching the medulla oblongata. In all these fishes, the respiration and circulation continued for a long time: the motions of the trunk and appendages alone disappeared, but the head and the region of the opercula continued to move as usual; and the circulation still went on, even

at the extremity of the trunk, more than half an hour after the total destruction of the spinal marrow."

On the other hand, the author always found in the other classes the circulation survive the destruction of all the parts of the spinal marrow which the respiration survived: the destruction in birds, for example, of the lumbar portion, and that of the lumbar and costal portions in quadrupeds.

Thus, therefore, 1. There may be destroyed, without detriment to the circulation, all the parts of the spinal marrow, which may be destroyed without detriment to respiration; and, when the spinal marrow may be entirely destroyed without injuring the latter, as in fishes, it may be entirely destroyed without injuring the former.

2. The spinal marrow has therefore but a relative and variable action upon the circulation as upon the respiration.

3. It is therefore especially because it exerts an influence upon the respiration, that the spinal marrow influences the circulation; and it is by the same parts that it acts upon each.

4. It is not in it, therefore, that the sole principle of the circulation exists.

Where, then, does this principle reside? The author intends, in a future memoir, to point out the parts in which his experiments have led him to place it, and to show the mode according to which it is distributed in them.—*Edinburgh New Philosophical Journal.*

Notice respecting a Pigeon which continued to live two days without Brain or the upper part of the Spinal Marrow.—M. DESPORTES, a physician, lately sent to the Academy of Sciences of Paris an account of an observation in which he saw a young pigeon live for two days in its shell, of which it could not rid itself; as well as some time after, although the brain and upper part of the spinal marrow were wanting. The author of the letter, deceived by the accounts given in some journals, had imagined this observation to be in contradiction to what M. FLOURENS had announced with respect to the influence of the spinal marrow upon respiration. M. FLOURENS remarked, that the important fact observed by the author is in no degree opposed to the inferences deducible from his experiments. A report is to be made to the Academy respecting M. Desportes's observations.—*Ibid.*

PATHOLOGY.

Rupture of the Hepatic Duct. By Dr. WOLFF.—A woman, sixty years of age, of a good constitution, the mother of seven children, had many years ago been attacked with jaundice; since which time she had been subject to colic, nausea, and vomiting. These attacks, however, were neither long nor severe. They required nothing more than simple remedies.

July 1st, Dr. W. was called to her in haste. She was suffering from violent spasm of the stomach, and crying out loudly. In a few minutes the spasm ceased, and the patient said that for some days she had been troubled with her accustomed colicky pains, but at first in a slight degree. They gradually became very violent; she threw up the food she had taken at dinner, but was not relieved, and the remedies she had before found beneficial were now had recourse to in vain. She had several returns of the pain, in a violent degree, while Dr. W. remained with her. Her pulse was nearly natural; heat of skin not increased; tongue clean; bowels open, and appearance of stools

healthy; urine as limpid as water. During the intervals of pain, there was not the slightest tenderness of the abdomen on pressure. Fifteen drops of tincture of opium relieved her. In the night she had several severe attacks, and was again relieved by an opiate. In the morning she was awake from her sleep with dreadful pain. Her belly was now swollen, tense, and very sensible; hands and feet icy cold; face covered with cold sweat; pulse rapid and small. She complained of great thirst, and every thing she took was immediately thrown from the stomach. Some internal rupture was feared, and a very doubtful prognosis was given. The case of Admiral Wassenaer, which was seen by Boerhaave, and is reported by Zimmerman, occurred to the mind of Dr. W.* Thirty leeches were applied to the lower part of the belly. The pain, however, increased, and every moment the anxiety and restlessness of the patient became greater. Her intellect was clear. She had constant but ineffectual desire to pass a motion. As the leeches had produced no benefit, blisters were applied, and opium was given, but without avail. A linseed injection procured a copious feculent stool, and she passed a small quantity of turbid urine. In the course of a few hours the pulse could not be felt. The coldness of the extremities had increased; the thirst and vomiting continued; the swelling of the abdomen was greater; the breathing was very quick. She retained her faculties to the last, and her muscular force was surprising. About four o'clock in the morning, twenty-four hours after the commencement of the violent spasms, she died.

Dissection. In the cavity of the abdomen was found about three pints of blood mixed with bile. The intestines were inflamed in different parts. Upon the omentum minus there was a spot of a dark colour, several inches in diameter; and, upon prosecuting the examination carefully, the hepatic duct was found ruptured transversely. The torn ends of the canal floated in a mass of coagulated blood, in which could be easily distinguished a recent coagulum, and one of previous formation, which was now much altered in appearance. Liver healthy. Gall-bladder contained a natural quantity of bile, and eight pointed calculi, each about the size of a pea, of a brownish green colour. The smallest of these calculi was in the cystic duct, which it did not however completely close, nor altogether prevent the exit of bile.

It is very probable that the hepatic duct had been inflamed when the patient was attacked with jaundice, many years ago, and that the extravasation had then taken place. The biliary calculi also were possibly formed at the same time. The violent attack on the 1st of July appeared purely spasmodic, and apparently arose from the irritation produced by the calculus in the cystic duct.—*Journal Complémentaire*, Sept. 1829.

Polypus attached to the Fundus Uteri.—M. LISFRANC lately found, upon dissecting a woman who had died of peritonitis, a large fleshy polypus attached by a broad pedicle to the fundus uteri. The fact is curious, inasmuch as it shows, contrary to the opinion of some authors, that polypi may arise from that part of the womb.—*Ibid.*

* Admiral Wassenaer died from laceration of the œsophagus. The symptoms had been so obscure during his illness that Boerhaave, and another physician of great ability, had not the slightest notion of the nature of the malady. The case of Admiral A. is detailed at great length by Zimmerman, in his *Treatise on Experience in Physic*, vol. i. p. 233, English transl.—EDITORS.

Case of the Bite of a Tarantula. By GASTANO SPIZZIRI, D.M. (*Osservatore Medico*, No. 19.)

Towards the end of July, 1826, a man, named Antonello, at Marano, twenty years of age, of a tranquil temperament, saw two insects, about the size of large spiders, and resembling them in shape, upon one of his boots: he paid no attention to them, but presently felt a sharp burning pain in the left arm, near the radial artery. There was no appearance of a bite; he only observed a drop of yellow humour, which he immediately wiped off. The painful sensation, notwithstanding, spread with the celerity of lightning to the armpit, and downwards towards the knee, and was also felt in the same direction on the opposite side. It quickly spread to the bones, which felt as if torn by pincers. Not being able to stand, he laid on the ground. His whole frame was convulsed; his body became cold, and the surface was covered with a yellow sweat; nostrils much dilated. In this condition his companions conveyed him to Marino. It should be remarked that, during the journey, the convulsive pain was suspended; but, when the mule stopped, the patient felt inclined to dance. A surgeon directly burnt the part with a hot iron, which produced no relief: the burn was not even felt.

The patient's father having great confidence in the empirics of Mendicino, known by the name of Ciraulari, sent for the cleverist of them, who, without loss of time, employed his superstitious charms. He put his right hand first upon the left thigh, and then upon the other; and the convulsion ceased first on the left side, and then on the right, as if the hand of Medusa had been applied.

It is left to the reader to decide whether the result is to be attributed to the effect of moral influence or not. It is certain that the patient of the village Esculapins found himself cured on the third day, having previously taken a bath of wine, in which had been boiled, in a copper kettle, his heroic herbs, amongst which was rosemary. The only internal remedy had been a glass of pennyroyal water, sweetened with sugar, which made his stomach uneasy.

Vincent Vena, of Marano, forty years of age, of rather an irritable temperament, was bitten in the same part, at the same place, by a little insect of a black colour, which, though killed with the other hand, was discovered to be a tarantula. He immediately felt, as in the preceding case, a sharp pain, which spread from the bitten part to the corresponding armpit, describing a single line, which became a yellow stripe; but he felt nothing in the other parts of his body, only a tormenting inclination to change of place and to dance. He submitted himself to the same empiric, who, by the same means, cured him at the end of three days.

M. S. Spizziri adds, in a note, that there is reason to believe that the plant with which the village physician of Mendicino performed these and other well-authenticated prodigies, is the Branck-urine, the *Aconthus Mollis* of LINNÆUS.

Account of the Effects of the accidental Inhalation of the Gas of the Burning Coal in the Wanlockhead Mines. By WILLIAM WATSON, Esq. Surgeon, Wanlockhead.

The Wanlockhead Mining Company finding it expedient, a few years ago, to place a steam engine on one of their mines for the purpose of lifting the

water, had a large turnhead or excavation cut in the rock for the accommodation of the machinery; and, that they might the more easily remove the smoke and other impurities arising from the combustion of the coal, they had a flue constructed of fire-brick, the entire length of which was 456 feet, and the perpendicular division of it 884. This they carried through an old mine, the lower part of which, being rather soft, required to be supported with wood. The flue till lately answered the purpose extremely well; but on Saturday, the 28th March last, the wood supporting the lower part of the excavation in which the flue is placed was observed to be on fire. As fears were entertained that the fire might communicate with the wood in the excavation connected with the machinery, the utmost exertions were made to arrest its alarming progress. These, in so far as the part surrounding the flue was concerned, proved entirely abortive, but were completely successful in preventing the destructive element from reaching the machinery.

The whole of Saturday was spent in fruitless attempts to extinguish the fire, which continued its ravages with unabated fury, and to ascend towards the surface till about twelve o'clock A.M., when the superintendent for the time resolved on closing the top of the flue to prevent the access of atmospheric air, and by that means to cut short the progress of the combustion. The measure in part succeeded, but, about eight o'clock A.M. on Sunday, considerable quantities of smoke were still seen to issue through the dense covering on the top of the chimney; and, as there was reason to apprehend that the mine might be laid under water, the overseers were induced to order thirty of the operatives into the mine to remove their tools. At that period, eleven o'clock, ten hours had nearly elapsed from the time that the air-passages had been closed till the miners again entered the mine, during which period combustion had still gone on to a certain extent: consequently, the greater part of the oxygen in the mine was consumed, and a corresponding quantity of carbonic acid gas, perhaps a little carbonic oxide, was generated, and rendered the surrounding medium highly noxious, and incapable of supporting either combustion or animal life. It was into this immense mass of irrespirable air, then, that thirty human beings precipitated themselves, some to the depth of sixty, others to the depth of 120 feet. Alike ignorant both of the existence and of the noxious quality of the gas, they perambulated the different ramifications of the mine in search of their implements, with the same unconcern as when it had its wonted supply of vital air. The effects, however, soon became evident on all who had thus heedlessly exposed themselves, and occasioned something like a simultaneous movement from every part of the work towards the pit. But this exertion, from accelerating respiration, only increased the evil. Debility made rapid strides, and a number of the poor fellows, after making every possible effort to save their companions, sunk into a state of insensibility themselves. At this period one or two of those who had suffered least with considerable difficulty reached the surface, where a number of their companions were assembled in anxious expectation of the issue. Twenty of these, with laudable intrepidity, hurried into the mine, and had the satisfaction to find that a few had by that time reached a station of comparative safety, though they were extremely weak; but the greater part were still exposed to the deadening influence of the gas. Two were still at the depth of sixty feet, one of whom was lashed to the rope by his companion, who, after performing what he supposed the last friendly office on earth, attempted to leave the death-like scene, but had only reached the distance of eighty feet

when he also fell senseless upon the floor of the mine, and was there found by those who went to his assistance. All, by the blessing of Providence, were ultimately rescued from their perilous situation.

The effects produced upon the different individuals were rather curious. Headach, giddiness, tingling of the ears, vomiting, tremor, with extreme debility, were more or less the portion of all. Two were in a state of insensibility for at least forty minutes; six for a shorter period. Three or four were highly excited, and, although it was Sunday, whistled, sung, and talked with the greatest volubility, occasionally threatening to inflict summary punishment on those near them for alleged injuries, not even recognising their nearest relations. In many respects they were very like persons in a state of intoxication from ardent spirits. The circulating system was considerably affected. In two cases the pulse was rather full; but in almost all the others it was soft and yielding; and in the two who were longest exposed, quick (ninety-four or one hundred), small, and very compressible. One man had an attack of convulsions six hours after he had ceased to inhale the gas; a second had diarrhoea, with considerable tenesmus; a third dysuria; a fourth lost all use of his arms from the elbow downwards for several hours; a fifth had colic; several experienced a slight difficulty in breathing, with oppression about the chest. The shortest period of exposure would amount to forty minutes; the longest to one hour and a quarter.

The remedial measures were free exposure to the external air, with a liberal use of diffusive stimuli, the principal of which was ardent spirits. The limbs were occasionally immersed in warm water, with the happiest effects. When nausea was present, a few grains of ipecacuan were administered to excite vomiting; and when torpidity of the bowels was induced, colocynth pills, with castor oil, were given freely.

The individual who had an attack of diarrhoea uniformly experiences the same effects after indulging in ardent spirits.—*Edinburgh Medical and Surgical Journal.*

Case of Hemorrhage after Extraction of a Tooth, from a hereditary Hemorrhagic Tendency.—A Jew, twenty years of age, thin, cachectic, and pale-featured, was attacked with obstinate hemorrhage after the extraction of the first grinding tooth of the right side of the lower jaw. When Dr. STEINMETZ saw him next day, the blood flowed in a continuous stream, and appeared to issue from the lacerated gum, not from the cavity from which the tooth-fangs had been extracted. An attempt was made to arrest the hemorrhage by squeezing into the cavity a mass of charpie sprinkled with styptic powder, and directed the patient to compress it by keeping the jaw closed; but in two hours he complained that the blood began to trickle into his throat. The charpie was therefore renewed, being previously dipped in dilute sulphuric acid. This plan likewise failed; in a short time the blood began again to fill the mouth. It was again tried, however, but without success: two hours after the second pledget was introduced, the blood began to issue from the man's mouth and nose. The charpie was then soaked with concentrated sulphuric acid, and also sprinkled with styptic powder; and, in order to effect exact compression, Lampe's tourniquet for hemorrhage from the tongue was applied to the jaw. During three days this dressing was changed every four or six hours, yet in the end without any advantage. The patient was then ordered likewise to

take every other hour from forty to eighty drops of the acid elixir of Haller; and, when this remedy had been persevered in for six-and-thirty hours, the hemorrhage ceased materially. For four days more, however, it returned every evening to such an extent as to induce the patient to resume the use of the acid pledgets.

The hemorrhagic tendency in this instance was derived from the grandfather. Several times, in consequence of a prick with a pin, his grandfather was brought almost to the point of death by hemorrhage. At last he was attacked with pulmonary inflammation, after exposure to cold and fatigue. During this attack he had bloody sputa, though not to any great extent; but on the sixth or seventh day he was attacked with profuse epistaxis, which nothing could check, and which consequently proved fatal. The father had in his youth been likewise several times reduced to a state of extreme exhaustion through hemorrhage produced by trifling injuries, and would have perished but for prompt medical assistance. At the age of sixty-five he had been free from the disease for ten years. The son, Dr. Steinmetz's patient, had been several times before seized with obstinate hemorrhage from trifling causes. Three sisters were entirely free from the hereditary peculiarity, but they imparted it to their children. One of the children was, at the request of the mother, circumcised in presence of the relator, who had extreme difficulty in checking the flow of blood.

These facts confirm the statements of former authors, that the hemorrhagic diathesis descends only to the male branches of a family; that it may be communicated to them through females, without these females having it themselves; and that it ceases in old age.—*Rust's Magazine*.

SURGERY.

Malignant Pustule cured by Compression.—M. GODARD, of Pontoise, recently communicated this case to the Académie Royale de Médecine. The advantages of the practice he recommends are confirmed by the experience of many esteemed surgeons on the continent, not only in malignant pustule, but in phlegmonous erysipelas, wounds from dissection, and other diseases attended with extensive swelling and inflammation of a limb. In M. Godard's case, a patient was three times attacked with a malignant pustule on the hand. The swelling of the arm, and the other accompanying symptoms, each time yielded to compression of the swollen limb. Cauterization had been previously employed with no avail.—*Journal Complémentaire*.

A Case of Aneurism by Anastomosis of the Forehead, treated by the Application of Ligatures. By B. C. BRODIE, F.R.S. Surgeon to the King; and Surgeon to St. George's Hospital. (*Med. Chir. Trans.* vol. xv. part i.)

The disease which Mr. JOHN BELL has described under the name of aneurism by anastomosis* is, according to my experience, of comparatively rare occurrence. Three cases of the kind, however, have been already recorded in

* I have employed the term Aneurism by Anastomosis, because it has become (in this country at least) sanctioned by custom, and for the purpose of avoiding the inconvenience which attends the frequent change of surgical nomenclature. At the same time I must acknowledge that it appears to me to be liable to more than one objection. 1st. I am not aware that it has

the Transactions of this Society, and to these I am now induced to add a fourth, the history of which will probably be deemed not devoid of interest, inasmuch as the disease had existed for many years, gradually increasing until it had reached an alarming extent, and, after other modes of treatment had been employed to no purpose, was ultimately cured by a very simple operation, founded on the same principle with that which Mr. WHITE and Mr. LAWRENCE have recommended in cases of the vascular nœvus of infants.

Miss —, in the year 1809, being then about five years of age, received a severe blow on the forehead, in consequence of her having run against the corner of a bedpost. Soon afterwards a small pulsating tumor, not larger than a pea, was observed at the part on which the blow was inflicted. For many years the tumor remained nearly stationary, and, as it produced no inconvenience, it excited but little attention. In the year 1821 it had manifestly increased in size, in consequence of which a surgeon in London was consulted, who attempted to cure the disease by pressure. For this purpose compresses were applied over the tumor, secured by a tight bandage round the head. Under this treatment the patient suffered from a constant and severe pain, and so far was it from being of any service, that, as soon as the pressure was left off, the tumor seemed to grow more rapidly, and the pulsation in it became stronger than before. From this time also there were frequent attacks of intense headach, which were to be relieved only by blood-letting.

After this no local treatment was resorted to until the year 1824, when the tumor having increased to a still larger size, another attempt to restrain its growth by pressure was instituted under the direction of Sir ASTLEY COOPER; but with no more favorable result than formerly.

In the end of June, 1826, the disease having made still further progress, Sir Astley Cooper was again consulted, and by him a ligature was applied (at four different times) round each of the four principal arteries by which the tumor was supplied. The result of these operations was a slight diminution in the size of the tumor, and some relief from pain; but even this favorable change was of short duration. In the course of the winter of 1827, the tumor again grew larger, and the painful sensations returned with redoubled violence, attended with a constant sense of weight over the eyes, and excessive depression of spirits. Occasionally there were paroxysms of pain still more violent than what was usually experienced, and followed by a state of extreme languor and exhaustion.

Miss — remained precisely in this state, except that the tumor continued slowly to enlarge, until the 9th of October, 1828, when she arrived in London, after an absence of many months, and I saw her in consultation with Dr. ROBERTSON, of Northampton. The tumor was now bigger than a large

been proved that there is in these cases any actual increase of the anastomosis which naturally exists between the smaller arteries. The phenomena of the disease are sufficiently explained on the supposition of the arteries being simply dilated and elongated, and thereby rendered tortuous; and the very interesting dissection recorded by Mr. MAYO, in the Medical Gazette, vol. i. p. 261, renders it probable that this is the only change that really takes place in the condition of the blood-vessels. 2d. The term aneurism by anastomosis might with equal propriety be applied to some other blood-vessel tumors, certain nœvi for example, which nevertheless differ from the disease in question in many essential circumstances.

double walnut, occupying a spot on the right side of the forehead, immediately below the margin of the hairy scalp. When the fingers were applied to it, they received an impression as if it was composed of a mass of tortuous vessels, and a strong pulsation was perceptible in every part of it. The skin covering the tumor was thin, and on some occasions, as in coughing, when the vessels were unusually distended, it appeared as if on the point of bursting. When the scalp was shaved, large and tortuous arteries were to be seen, even from a considerable distance, passing into the basis of the tumor, in every direction, from each temple, from the orbit of the right eye, and over the crown of the head from the occiput. Pressure being made on the two temporal arteries at the same instant, the pulsation of the tumor was perceptibly, but not greatly, diminished. There was a constant sense of weight and pain in the forehead, and the latter was very much aggravated by pressure on the tumor, especially on a particular spot towards its upper edge.

The sufferings of the patient were such that she was willing to submit to any plan of treatment which might afford her even a chance of being relieved. On considering the subject, it appeared to Dr. Robertson and myself that there was no reason to expect advantage from any further attempt to obliterate the arteries by which the tumor was supplied with blood, nor indeed from any operation which had not for its object the complete extirpation and removal of the diseased structure. But the attempt to accomplish this object by means of the knife, would necessarily be made at the risk of a most alarming hemorrhage; and the application of the actual cautery, or of caustic, would not only be uncertain as to the result, but, if carried to a sufficient extent completely to answer the intended purpose, might occasion such injury to the bone and periosteum as would be productive of much subsequent inconvenience, if not actual danger, to the patient. Under these circumstances Dr. Robertson immediately assented to the proposal which I made, that I should endeavour to extirpate the tumor by means of ligatures, so applied as to produce the complete strangulation of it at its base. There seemed to be at any rate no more effectual nor any safer method of proceeding; but, even with respect to this, it was impossible not to experience, in the first instance, considerable apprehensions as to the loss of blood which might take place on the separation of the slough. These apprehensions were, however, greatly diminished, if not altogether removed, in consequence of the conviction which we felt that the unusual dilatation of the principal arteries of the scalp was to be regarded as the effect, and not the cause, of the morbid growth of the smaller vessels, and as being likely to subside immediately on the tumor being destroyed.

A further consultation having been held with Mr. KEATE, and afterwards with Sir Astley Cooper, and both these gentlemen having agreed in opinion with Dr. Robertson and myself, I proceeded to perform the operation, on which we had determined, on Wednesday the 15th of October, in the following manner:

A long steel needle, the length of which was about double the diameter of the tumor, was passed between it and the periosteum, penetrating the skin on each side. By means of this needle the tumor was raised as much as possible, and a second needle was introduced in the same manner, but beneath, and at right angles to, the first. A very strong silk ligature was then bound several times round the base of the tumor, below the needles, as tight as it could be

drawn. The tumor immediately assumed a purple colour, as if in a state of strangulation. The operation occasioned great pain, both at the time and afterwards; but, from the instant of the ligature having been applied, the peculiar sufferings occasioned by the disease were at an end.

In the evening, the pulse being strong, the skin hot, and the pain caused by the ligature very severe, some blood was taken from the arm.

October 16th.—The pain was somewhat abated, the tumor had assumed a dark colour, and had begun to shrink.

17th.—The tongue was furred, the pulse hard and frequent, and the skin hot. More blood was taken from the arm.

18th.—All the arteries entering the tumor had either ceased to pulsate or pulsated less strongly than before, with the exception of those at the upper part. Concluding from this last circumstance that the strangulation was not every where complete, and that a still greater degree of compression was necessary, I armed one of the needles with a strong double ligature, then drew it through, and having removed the needle, tied the ligatures one on each side.

20th.—The other needle was armed in the same manner, and by means of it another double ligature was passed through the base of the tumor, and tied like the former one.

22d.—The slough had begun to separate at its edges, and all severe pain had ceased. The pulsation of the arteries at the upper part was greatly diminished.

26th.—The slough came away without the smallest hemorrhage. Dry lint, with stripes of adhesive plaster over it, was applied to the ulcerated surface.

In the course of a few days the ulcer had assumed a healthy appearance, and had begun to granulate.

The appearance of the ulcer was very carefully watched, and two or three times the nitric acid was applied to some spots on its surface, in which there was an appearance that led Mr. Keate and myself to suspect that there might be a disposition to reproduce the original disease. The sloughs made by the nitric acid soon separated; the sore continued to heal, and the pulsation of the arteries in the neighbourhood to diminish.

December 2d.—The cicatrix was completely formed, and nothing unusual was to be observed except that between it and the eyebrow there was a slight appearance of fulness, manifestly depending on the skin at this part having been for a long time much distended, and having not yet returned to its original dimensions. There was no more pulsation in the arteries, which had formerly been so much enlarged, than in those of the other side of the forehead; and the patient was free from pain and all other inconvenience.

Case of Intestinal Obstruction successfully treated by Mechanical Means. By ALEXANDER RUSSEL DUGUID, M.D. Kirkwall. (*Edinburgh Med. and Surg. Journal.*)

On the 10th December, 1828, three o'clock P.M. I was called to visit J. H., a young man, about twenty years of age, who had suffered severely, since the afternoon of the 8th, from obstinate constipation, attended with occasional paroxysms of violent pain in the abdomen, generally ending in efforts to vomit. On the 9th he had taken two ounces of castor oil, and a common domestic enema had been administered; but the greater part of the oil had

been vomited, and neither of these expedients produced the smallest discharge from the bowels, or any mitigation of his sufferings. He had also used the warm bath. Abdomen hard, and very much distended; pulse 100.—*Emir Sanguis ad 3xxiv. et habet. Haust. c. Tinct. Opii gutt. L.*

In two hours the opiate began to have its due effect, and he experienced almost total cessation of the abdominal pain and retching. This appearing a favorable opportunity for the exhibition of a purgative, an ounce of castor oil was given every half hour, till four ounces were taken without being rejected; and I also threw up a strong enema of senna and salts. The latter having come away in half an hour without any trace of feculent matter, it was frequently repeated, but always with the same result. At nine P.M. he was again bled to sixteen ounces, and an emulsion containing two drops of castor oil was given every half hour. The greater part of this remained on the stomach, but at twelve P.M. no evacuation had taken place from the bowels, though repeated attempts had been made; and the immunity from suffering which the patient had enjoyed while under the influence of the opiate was now at an end, the paroxysms of pain having returned with aggravated violence.

Being twelve miles from home, and from the nearest supply, I was unavoidably confined to the chance which remained to my patient from mechanical means alone, since no new medicinal expedients could be resorted to. Dilatation of the rectum with warm water, thrown up by Weiss's powerful syringe, was next resorted to. As soon as about a pint and a half were thrown up, he complained of much pain and distention, and it was returned with great force in spite of my efforts to prevent it, and without any trace of feculent matter. This was frequently repeated, with the same result. I then introduced the elastic tube of Weiss's instrument, well oiled, about ten inches into the rectum, and, finding an obstruction to its further passage, I fitted the syringe to its extremity, and continued to exhaust the air for a minute or two; but this having no effect, I attempted to push the tube past the obstruction. After some difficulty, and repeated trials, I gained a few inches, when all at once, to my great satisfaction, the resistance was overcome, and a copious discharge of very fetid flatus, with some liquid feces, took place through the tube, with almost instant relief of the distention and pain of the belly. I then fitted the syringe to the extremity of the tube, and pumped out a large quantity of feculent matter, of the appearance and consistence of yeast. When this was too solid to pass through the tube and syringe, so as to choke the instrument, a quantity of warm water was thrown in, and the pumping process resumed. In this way a great accumulation of feces was brought away, with total relief of all the symptoms. Upon withdrawing the tube, the cause of the obstruction (which indeed I had previously surmised,) became very apparent, by the thin streaks of hardened feces with which the tube was coated on various parts of its surface, and which were confined to that portion of it which had passed the region, about ten inches from the anus, where the great difficulty of introduction had been experienced. An opiate enema was now administered, and I left my patient at eight A.M. of the 11th. A purgative mixture of senna and salts was sent him, which operated well, and left him convalescent.

Obstruction of the intestinal canal is a disease so serious in its nature, of so frequent occurrence, and often so unmanageable by the ordinary treatment

of clysters and purgatives, that any available addition to the resources of our art, free from danger, and of easy application, cannot fail to be acceptable to the professional public. So far as I know, the expedient, the good effects of which in one instance I have detailed, has been hitherto untried; nor was I aware that it had ever been proposed, until long after the occurrence of the above case. At all events, it has no place, as applicable to desperate cases, in the systems of medicine which are generally put into the hands of young practitioners. Our principal reliance is placed on purgatives, mechanical dilatation with warm water, and tobacco in the form of smoke or infusion. When excessive vomiting, indicating the inversion of the peristaltic motion, and great swelling of the abdomen, have taken place, many inconveniences attend the use of purgatives; for, even when the difficulty of getting them retained on the stomach is surmounted, and their influence is duly exerted on the bowels, they seem to increase the distention by forcing down the contents of the upper intestines, and thus produce a state which is unfavorable for the action of the abdominal muscles in the expulsion of feces. On this account, the croton oil, the most powerful of them all, seems better adapted to cases where the costiveness is owing rather to torpor than to obstruction of the bowels. The application of the tobacco enema, though sometimes effectual, is also in some degree objectionable, because it is seldom had recourse to unless as a last resource; and when great prostration of strength has already taken place, its debilitating effects are confessedly not free from danger. If, then, a great proportion of cases of ileus be caused by a hardened ball of feces in the colon, at no great distance from the anus, perhaps at the sigmoid flexure, a different, or at least an additional expedient, when all others fail, ought to be employed. A hollow bongie of elastic gum, with its point conical and perforated on the sides, ought to be introduced into the rectum; and the seat of the obstruction having been thus ascertained, by cautiously applying additional force, it may be pushed through the offending substance, if merely hardened feces, and then the management of the case will become comparatively simple. It will be necessary, no doubt, in such an operation, to be cautious. It is possible that the point of the tube may become entangled in the coats of the intestine, and an obstacle to its farther progress may be thus produced; but the resilience of the instrument will sufficiently indicate the nature of the difficulty, and communicate a very different feeling from the resistance afforded by an inelastic substance such as hardened feces. Where the obstruction arises from calculus, no benefit is to be expected from the measure I have detailed; and even the natural contents of the intestines may become so indurated as to form an obstacle almost equally insurmountable, at least by an instrument of so soft and yielding a nature as can be safely employed for such a purpose; but it may be presumed that such cases are comparatively rare, and that in general the cause of the disease may, with care and perseverance, (more especially if within the efficient reach of the tube,) be eventually overcome. Of the bad effects which might by possibility result from such a practice, I should wish to speak guardedly, my experience being much too limited. It is certainly easy to conceive that any violent and repeated efforts might produce injury to the mucous coat of the intestine, perhaps dangerous inflammation. But it is not probable that such accidents will occur in the hands of any experienced person; and that they are not peculiarly liable to happen, may be inferred from the freedom which is used

with these parts, in introducing bougies for the dilatation of permanent stricture, in which cases, from the morbid irritability already existing, accidents might more naturally be expected to follow.

Several months ago, a similar case was detailed in the *Medical and Physical Journal*, occurring at Genoa, in which, after the failure of every other remedy, the disease was happily overcome by exhausting the air in the rectum, beneath the seat of the obstruction; but it may safely be affirmed that in many instances so feeble an expedient would be altogether nugatory. It forms, however, the nearest approximation to the practice above described which has as yet occurred to me, and was unquestionably the hint which led me to the adoption of a bolder and more effectual measure.

Case of Wound of the Femoral Artery, successfully treated. By WILLIAM G. DICKINSON, M.D. of Franklin, Tennessee. (*American Journal of Medical Sciences.*)

At ten P.M. on the night of the 25th March, 1828, I was called in haste to see Mr. James C. Hill, merchant, a young gentleman of moral habits and fine health, who, it was said, had been stabbed and was dying. I found him, ten minutes after the reception of the injury, lying on his back, covered with blood, and with both hands holding the edges of the wound firmly in contact. The wound was a little below the external abdominal ring, and just exterior to the spermatic cord of the right side, and nearly in the direction of a line drawn from the upper portion of the symphysis pubis, to the inferior spinous process of the ilium. A large tumor extended from the ilium to the pubes, and the right half of the scrotum was distended to four times its natural dimensions, of a dark purple colour.

DRS. R. H. CAMPBELL and T. STITH having come to my assistance, I made an incision, two inches in length from the wound, towards the symphysis pubis and over the most prominent part of the tumor. After going as deep as prudence seemed to sanction, and finding nothing but an injected cellular structure, another incision, three inches in length, was made towards the spinous process of the ilium, in the direction of Poupart's ligament. So soon as the skin and cellular tissue were divided by this incision, the blood gushed forth with considerable velocity. I instantly passed my finger into the opening, and, guided by the warm jet of blood, placed it on the femoral artery. About one third of the artery's circumference was divided directly at the point of its exit, from under Poupart's ligament. This ligament was also divided at its lower margin, apparently to an extent equalling the breadth of the instrument by which the wound was inflicted.

The wound being cleansed, it was evident that the hemorrhage was completely controlled by the pressure of my finger: in fact, it was so entirely suppressed, that Dr. Stith proposed to confide the case to compresses and a bandage. To secure the vessel conveniently, it was found necessary to make an incision an inch and a half in length, in the direction of the femoral artery. Constant pressure being necessary to prevent a recurrence of hemorrhage, some difficulty was encountered in passing the ligature. It was, however, finally effected by a director and needle, which last instrument was firmly grasped in a pair of small forceps. The ligature being divided, one portion was carried as high as possible, and firmly tied; the other as low as the de-

tachments would permit, and also firmly tied. The ligatures used were of silk, in preference to the animal ligatures suggested by Dr. Stith.

All pressure being removed, the wound neatly sponged and left exposed for some time, and no hemorrhage recurring, the parts were brought in contact, and secured by adhesive strips, over which a compress and bandage were applied. The patient's legs were flexed and well supported, and his situation rendered as comfortable as circumstances would permit.

He was left to repose at three o'clock A.M. after taking Tinct. Opii gutt. xxx.; pulse ninety-five. He had taken during the operation $\frac{3}{4}$ ss. Camph. Tinct. Opii, and some undiluted spirit, which he said was tasteless.

26th.—Slept none since the operation; complains of pain in different parts of the body, but more particularly in the knee and muscles of the leg of the right side; no appreciable difference in the temperature of the two extremities; pulse ninety-two. At intervals during the day, took a little chicken water, and at night a cup of tea. No pulsation in the leg, and in the evening rather cold. Gentle friction ordered. At night took $\frac{3}{4}$ ss. Epsom salts in three doses. At ten o'clock at night, slight pulsation at the internal ankle was perceptible to Dr. O'Bryan, who was with him.

27th.—Slept three hours during the night. Salts operated well; felt relieved by their operation.

Ten o'clock A.M.—Pulse eighty-five, and quite perceptible at the ankle; still complains of pains in the joints and muscles of the right extremity.—Ordered friction and passive motion of the ankle and knee joints. A cup of tea for breakfast, and light soup at noon.

Four o'clock P.M.—Pulse ninety-six. Too much company. Slept half an hour in the evening.—Eight o'clock: Pulse eighty-five. Took a cup of tea. Being restless, Tinct. Opii gutt. xxx. were given at twelve o'clock.

28th.—Slept two and a half hours after taking the opiate. Pulse this morning eighty and regular. Ordered for breakfast tea and a little toasted bread.

Six o'clock P.M.—Pulse seventy-five.

29th.—Passed a restless night. At four o'clock A.M. took Tinct. Opii gutt. xxx.; after which he slept two hours.—Eight o'clock A.M., pulse 100.—Ten o'clock, ordered salts, which operated well, and afforded considerable relief.

Six o'clock P.M.—Pulse eighty. Eight o'clock, wound examined: it had united throughout, except at the exit of the ligatures and the angle of junction of the incisions, at which point there was a suppurating surface, about an inch and a half long, and half an inch broad, presenting pus of a healthy character. The edges of the wound were drawn in contact by adhesive slips. Ordered Tinct. Opii gutt. xl. to be taken at eleven o'clock.

30th.—Slept but little, notwithstanding the opiate.—Six o'clock, pulse 100. Ordered coffee for breakfast, and a little rice at noon. Slept several hours during the day.—Four o'clock P.M., pulse eighty-four, and soft.

31st.—At ten o'clock last night took Tinct. Opii gutt. xxx., but passed a restless night. At six o'clock this morning had a natural evacuation from his bowels.—Eight o'clock, disposed to sleep; pulse 108, and vibrating. Diet as yesterday. Wound looks well.

April 1st.—Rested better last night than he has done since the accident; took no opiate.—Six o'clock A.M., pulse eighty, and soft. Took Epsom salts $\frac{3}{4}$ ss. which operated well. Diet as yesterday. The wound looks well, but the pus a little tinged with blood.

2d.—At one o'clock A.M. took Tinct. Opii gutt. xxv., in part to relieve a

disposition to cough, which has become troublesome, and irritates the wound. The pus considerably tinged with blood, but the wound healthy in appearance; pulse 100, with some heat of the skin. Diet as usual.

From this period his improvement was gradual, until the 11th, when the lower ligature came away: the other ligature remained until the 18th, when it was withdrawn without difficulty. The wound presented a healthy aspect until the 27th, at which time its appearance was irritable, and the discharge unhealthy. This change was produced by circumstances of an exciting and disagreeable nature. Ordered a more nourishing diet.

From this to the 31st the improvement was rapid, at which time the wound was entirely cicatrised.

Mr. Hill has since enjoyed uninterrupted health, and experiences no inconvenience from the accident; and is actively engaged in his usual avocations.

MISCELLANEOUS.

Mode of preserving Specimens of Morbid Anatomy. By JOHN S. GASKOIN.—Mr. Gaskoin recommends the following means for preserving the appearances of diseased parts:

“Having removed the diseased part from the body, it should be as little handled or dissected as possible, especially when the effects of inflammation, congestion, &c. are to be preserved, as the blood may be pressed from, or disturbed in, the minute vessels. Let the blood which may have escaped from cut vessels, be gently washed off from the surface by a solution of the muriate of ammonia, or be absorbed by a soft sponge, lightly applied. The part should then be wrapped with care in old linen, and be so immersed in one part of a saturated solution of the muriate of ammonia, (sal ammonia of commerce,) and two of rectified spirit of wine. After two or three days the linen may be removed, and the part restored to the fluid.

“Should the preparation be large, or, from the nature of the disease, contain a large quantity of aqueous fluid, then an additional portion of the muriate of ammonia in powder should be added, to meet the excess of aqueous menstruum.

“The time necessary for maceration will mainly depend upon the size of the part to be preserved; but, generally, from ten to fifteen days will be found to be sufficient, although nothing can be lost by an extension of that time. Being taken from the macerating fluid, it should be again washed in a solution of the muriate of ammonia, then dissected as much as requisite, and be ‘put up’ at once, in equal quantities of a saturated solution of the above salt in distilled water and rectified spirit of wine. I should observe that, in these proportions, the part is somewhat corrugated, which is not the case if *one third* of the saline solution be used with two of the spirit; yet, in the former quantities, I have some reason to think the appearances of disease may be more securely preserved.”

This solution, Mr. G. says, seems to have the property of fixing the blood in the extreme ramifications, without constringing the vessels themselves; while rectified spirit, corrugating the delicate membranes of the minutest vessels, repels their contents into the larger, the thicker coats of which are easily acted on, and thus reduces the appearances of inflammation, &c.

INTELLIGENCE.

MONTHLY REPORT OF DISEASES.

WE have recently seen two instances of Herpes Zoster (shingles), which were attended with symptoms of great disturbance to the general health. In most cases this complaint is rather distressing to the patient, from the irritation it produces, than alarming from its constitutional effects. Our best authority upon cutaneous diseases, BATEMAN, whose work has lately been so much improved by Dr. THOMSON, appears inclined to doubt even its occasional severity. He has "never in any instance witnessed any untoward symptom;" nor has he known it "followed by much debility."

The cases which have at this moment directed our attention to the subject, were similar to several others we have seen in the course of the last few years, and most of them occurring in persons of an advanced age. For an uncertain period, (either a few days or only several hours previous to the appearance of the eruption,) the patients we refer to were attacked with very violent darting pains through the chest and epigastrium; great restlessness; mental and bodily depression; a low and almost imperceptible pulse, and cold clammy sweats; sometimes paroxysmal attacks of palpitation of the heart and dyspnoea. We have not observed the "constant derangement of the digestive organs" as one of the precursory symptoms, which it is stated to be by RENAULDIN and other writers. From the continuance of pain, irritation, &c. the functions of the stomach are usually disturbed during the progress of the complaint. The appearance of the eruption is not generally followed by a decided diminution of the severity of the constitutional symptoms. In some cases we have seen them aggravated at that period, and continue for many days with unabated violence, and followed by great debility.

Various means have been suggested to relieve the distressing itching and intense heat which in violent cases attends the eruption. These symptoms we have always found benefited by warm fomentations, assiduously applied. In one case, cold vinegar and water had been tried as a local application by the patient. No alteration of the eruption followed, but both the local and general symptoms were rendered much more violent. We are informed by an experienced friend, that the itching and heat attending the eruption are relieved by the application of a solution of lunar caustic; about two grains to an ounce of water. To abate the severe lancinating pains in the chest, opiates should be freely given.

Although the disease is not unfrequently severe, we are not aware it has ever proved fatal. The opinion that herpes zoster certainly destroys if the eruption entirely encircles the body, is admitted by all modern writers to be erroneous. It originated, we believe, with Pliny, who states "Qui zoster appellatur enecat si cinxerit." (Nat. Hist. lib. xxvi. cap. xi.)

We have been induced briefly to mention the above cases, as proofs that the disease is not always so mild or trifling as the practitioner might expect from the statements of systematic writers upon cutaneous diseases.

THE SIAMESE BOYS.

THE curiosity of the public, and especially of the medical public, has been raised to the highest pitch by the appearance of these extraordinary youths in

the metropolis. As our readers must have perused some of the many descriptions which have been given in the public papers of this remarkable freak of nature, we shall confine ourselves to a brief mention of the most striking circumstances appertaining to the phenomenon.

These boys are about eighteen years of age. They are attached to each other by a bond of union, extending from the cartilago ensiformis to the navel. In this connecting medium there is no pulsation whatever perceptible. It has a firm fleshy feel, excepting at the upper part, where the structure, during the course of the last six years, has gradually become harder, and is now as firm as cartilage. In no part of this attaching substance is there any appearance of ossification. There is but one umbilicus, which is situated in the middle of the lower margin of the bond of union. The pulsation of the hearts of the two boys is synchronous. With the exception of the preternatural connexion we have described, both boys are naturally formed. They enjoy a perfect state of health, and have never suffered from any disease but smallpox, with which they are slightly marked. One, indeed, had recently an attack of toothach, and during his indisposition the other suffered somewhat from mental anxiety, but his bodily health remained unaffected. They have never taken medicine of any kind. Their alvine evacuations occur nearly at the same time. Their ordinary and most natural position is face to face, but they are able to stand side by side without any inconvenience, the arm of one being generally thrown round the neck or the waist of the other. Their movements, which are performed with perfect facility, and even some grace, have been correctly compared to the evolutions of persons in the act of waltzing. They occasionally speak to each other, but have never been known to keep up a continued conversation.

We cannot perceive the slightest reason to suppose that one mind presides over the two bodies. They are, no doubt, distinct and perfect individuals as far as regards their mental faculties, and in all probability the only variation which exists in their corporeal structure from a natural formation, is the accidental bond of union we have described. It is true that their movements are simultaneous, or nearly so, but this circumstance must be regarded as the effect of habit and necessity. It may be worth while to mention that, when engaged at a game of draughts with a friend, the one corrected a mistake which the other was about to commit.

They have a strong sense of moral decorum, and are averse to any particular examination of their persons before many witnesses. Upon being asked if they would be gratified by the society of females, they replied they would wait until their return to their native country, when they would have no objection to marry. They are remarkably cheerful in temper, and apparently quick in intellect. We observed that they examined with eager curiosity every novel object.

Upon a first and superficial inspection of the part by which they are united, their separation might be thought practicable and safe; but we believe there is but one opinion upon this subject among those who have given it a proper consideration. The attempt would be neither justifiable nor safe. Not justifiable, because the boys themselves are shocked at the idea of separation; and unsafe, because there is every reason to believe that the abdominal cavity must be laid open in the attempt. When one boy coughs, the uniting substance feels as if some part of the viscera were forced into it. In the event of the death of one, their cautious separation would become an act of necessity,

although we think it more than probable that neither would long survive the shock of losing his mate.

It has been said that their intellectual powers are unequal, but it would require greater opportunities of observation than we have had to form any opinion upon this subject. In features they strongly resemble each other, although a difference is perceptible upon a close examination. They have never been known to have the least dispute or contention with each other. The story that has passed through many of the public journals of one wishing for a cold, while the other was determined upon a hot, bath, is unfounded. So far, then, they have presented a rare instance of undisturbed fraternal harmony, and whatever difference of opinion may arise between them in their future progress through life, still they must remain the—united brethren.

It is gratifying to perceive the very affectionate attention which these youths receive from Captain Coffin. We have permission to see them some evening when they have retired from the exhibition of the day, and if any additional circumstances should strike us as worthy of mention, we shall communicate them to our readers.

DEATH OF THE LIVING DUPLEX CHILD.

In our last Number we gave an account of a living duplex child: twin females, furnished with two heads, two necks, and four arms, but grafted or united side to side, so as to form only one female body, terminating in two legs, or inferior extremities, of usual shape. The death of these children was announced in the *Journal du Commerce* a few days ago. Since their departure from Italy, the health of Harriet gradually declined, and for some days there were no hopes of her recovery; while Christina had only a slight cold. Scarcely had Harriet ceased to breathe, when Christina refused the breast, and soon expired. The Academy of Sciences has procured a model of this remarkable *lusus naturæ*; and it is hoped that permission will be granted to embalm so curious a specimen of the vagaries of nature.

MONTHLY LIST OF MEDICAL BOOKS.

[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]

A Supplement to Myology, illustrated by coloured Plates, on a peculiar Construction; containing the Arteries, Veins, Nerves, and Lymphatics, the Abdominal and Thoracic Viscera, the Brain, the Ear, the Eye, &c. By E. W. TUSON, F.R.S. Lecturer on Anatomy and Physiology, &c.—J. Wilson, London.

The present work is the supplement to one previously published on the Muscles, exhibiting them in layers, as they are seen in dissection. The intention of the author is to explain the course, situation, and relative position of the various parts mentioned in the title. The first plate, a dissection of the head and neck, exhibits at first sight the common integuments, which being elevated, shows the muscles, vessels, nerves, &c.; which can be raised, and the deeper-seated parts seen, until the bones are brought into view; by which means the connexion, course, and ramifications of the vessels are satisfactorily explained, giving an impressive idea of the structure of this part of the human body. The second plate contains the abdominal and thoracic viscera; and the following, the other important parts, on a similar construction.

The manner in which the work is contrived and executed, reflects infi-

nite credit on the talent, industry, and perseverance of the author; and, in our opinion, it appears in every respect calculated to assist the study of that branch of science on which it treats. We can safely recommend it to the practitioner in the country, as likely to be of great practical utility in keeping up or refreshing his knowledge of the anatomical structure of the human frame. To the pupil, it will lay a foundation for his future studies; prepare and assist, in a great measure, his labours in the dissecting room; and to the non-professional man of science, its perusal will afford much pleasure and satisfaction.

Auli Cornelii Celsi De Re Medica; Libri Octo. Editio nova, ex recensione Leo Targa, curante C. F. COLLIER, M.D. Accedit Lexicon Celsianum breve. Vol. I. With an English Translation.—32mo. Hingley, 1829.

A very useful assistant to the medical student who requires improvement in the Latin language.

An Introduction to Medical Botany. Illustrated with coloured Figures. By THOMAS CASTLE, F.L.S. &c.—12mo. pp. 172. Cox, London.

The medical student, who cannot be expected to enter into the study of very elaborate works on medical botany, will find in this little work the elements of the subject explained with brevity and perspicuity.

METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

October	Moon	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	mid.	3 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
			°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.
20		.15	58	60	49	29.72	29.66	65	60	SW	WSW	Cloudy	Fine	Show'ry
21			55	58	49	.64	.53	61	61	SSW	SSW	Fine	Fine	Fine
22			52	54	44	.54	.52	61	59	WSW	NNW	Cloudy	Fine	Cloudy
23			49	50	41	.82	.85	59	60	NNW	N	Foggy	Fine	Fine
24			49	51	40	.83	.82	60	60	NNE	NE	Fine	—	—
25			45	51	43	30.01	30.06	62	62	WSW	SW	Foggy	Fine	Fine
26			47	50	42	.17	.50	65	65	N	NNE	Cloudy	Fine	Fine
27	●		48	51	41	.25	.19	63	61	NNE	NNE	Foggy	Fine	Cloudy
28			46	50	40	.16	.21	59	59	NE	NNE	Fine	—	Fine
29			44	52	41	.21	.14	60	61	NNE	N	—	—	—
30			46	51	40	29.90	29.78	61	58	W	W	Cloudy	Fine	Cloudy
31			44	51	39	.80	.93	58	55	N	N	—	—	—
Nov. 1			40	42	36	.97	30.02	55	57	WNW	WNW	Fine	—	Fine
2			40	47	40	30.06	.10	57	59	WNW	WNW	Foggy	Cloudy	—
3			44	47	45	.00	29.99	59	62	WNW	WNW	—	—	Cloudy
4	☽	.50	49	51	40	29.79	.50	65	65	WSW	SW	Rain	Rain	Rain
5			48	50	44	.85	.91	65	65	WNW	W	Cloudy	Fine	Fine
6			47	51	43	.84	.75	65	63	W	W	Fine	Fine	Cloudy
7			45	52	36	.78	.80	63	60	W	W	—	—	Fine
8			41	47	40	.83	.88	61	61	WNW	WNW	—	—	—
9			44	52	45	.91	.97	61	62	WNW	NW	—	—	—
10			50	50	42	.88	.66	63	63	WSW	SW	Fine	Cloudy	Rain
11	○	.15	47	55	47	.82	.82	63	65	WNW	WSW	Foggy	Cloudy	Cloudy
12			52	55	45	.80	.74	66	70	WSW	W	Rain	Show'ry	Rain
13		.17	53	58	40	.92	30.05	68	65	E	E	Cloudy	Fine	Fine
14			42	46	38	30.01	29.97	65	65	SE	SSW	Cloudy	Fine	Rain
15			46	52	35	.98	30.00	63	63	SW	N	Show'ry	Fine	Show'ry
16		.21	40	42	31	30.00	.19	63	60	N	NNE	Fine	—	Fine
17			36	42	35	.24	.18	60	64	NNE	N	Fine	Fine	Foggy
18	☾		39	41	32	.24	.28	64	65	N	N	Foggy	Fine	Foggy
19			33	36	29	.30	.37	65	65	N	N	Th. Fog	Fog	Fog.

The quantity of Rain fallen in the month of October, was 1 inch and 49-100ths.

Communications have been received from Dr. and Mr. GRIFFIN, Dr. A. T. THOMSON, and Mr. I. H. BURGESS.

The Editors are obliged to Dr. STROUD for his polite intimation.

ERRATUM. At page 407, line 20, for "perspiration" read "respiration."

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